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DEUTSCHE ZUSAMMENARBEIT

A Study on Ostad-Shagerdi (Apprenticeship) Training in Afghanistan

تطبیق کننده:
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Glossary

APPRO – Afghanistan Public Policy Research Organization
ANQF – Afghan National Qualifications Framework
ASDP – Afghanistan Skills Development Project
GiZ – Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
MoEd – Ministry of Education
MoHE – Ministry of Higher Education
MoLSAMD – Ministry of Labor, Social Affairs, Martyrs and Disabled
NESP – National Strategic Plan
NOSS – National Occupation Skills Standards
NQA – National Qualification Authority
NSPD – National Skills Development Plan
PMUs – Programme Management Units
TVET – Technical Vocational Education and Training

Foreword

Every society is faced with the task of passing on knowledge and experience to the next generation. This applies to experiences and value orientations within the family, to societal experiences and to the knowledge and experience needed to produce goods, deliver services and engage in trade. The more complex and developed a society is, the more sophisticated the methods of delivery and organisation the process of education is embedded in. When handing down knowledge and providing orientation is beyond the family's capacity, societies begin to set up education systems and introduce compulsory schooling for children and young people.

Vocational education is also about handing down knowledge, skills and life plans – as can be seen very clearly in Afghanistan. On the one hand, this country has started to set up a formal vocational education system to prepare its young people for working life while, at the same time, acquainting them with their country's cultural and social practices and customs. On the other, a working apprenticeship system actually already exists in many small artisan and commercial companies. Although it is overshadowed by the emerging formal vocational education system, this informal system is much larger and based on decades-old, if not in places centuries-old, traditions. Every visit to a bazaar reveals young people at work. Upon enquiry, it generally transpires that they are apprentices who are learning an occupation over a set period of time. This Bazaar Study aimed to find out more about apprenticeship training in Afghanistan following talks with national experts. The study revolves around three key questions:

- Who are these businesses training?
- How is training organised?
- What are the apprentices planning to do once they have completed their training?

The study findings were greatly surprising. Afghanistan has an informal but viable vocational training system and one that demonstrates astounding structural similarities with the kind of in-company vocational training practised in certain countries in Europe:

- The status of the young person within the company is defined as an apprenticeship that starts and finishes on a specific date.
- Apprentices first receive a basic grounding in their occupation before gradually moving onto more complex tasks.
- At the same time as they are learning their trade, apprentices also attend a mainstream school.
- Almost 80% of apprentices plan to set up their own business once they have finished training.

The companies in which the apprentices undergo training are organised in guilds which are themselves grouped at a city, province and central level. All of the guilds belong to the Federation of Afghan Craftsmen and Traders (FACT).

The development potential inherent in this traditional in-company vocational training is self-evident. The dual vocational training system, which is held in high regard worldwide, actually emerged from structurally comparable constellations in a number of European countries.

This study and a conference scheduled for the second half of 2014 constitute an initial move to raise awareness about vocational training in Afghanistan amongst members of the public interested in vocational education policy and to initiate talks as to how this informal vocational training system can be modernised with due care while retaining its integrity.

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1. Introduction

With some success, the bulk of the interventions since 2001 aimed at reconstruction in Afghanistan has been driven by economic models emphasizing the importance of private sector and need for increasing value adding activities by Afghan producers and service providers. However, there remain significant gaps in the knowledge base that informs reconstruction policy making and programming on strengthening the pre-existing (and resilient) bases of economic activity and growth.

As with most traditional and older societies, Afghanistan's economy, particularly in urban areas, is to a significant extent made up of constellations of enterprises of the same or related crafts clustered around a number of identifiable locations. These clusters have at least two defining features of relevance for efforts to increase the productive capacity of Afghanistan's workforce. First, in almost all clusters there are apprenticeship arrangements to train the future generation of craftspersons. Second, there are clearly defined structures which govern and sustain these clusters. Each cluster is represented by a *senf* (traditional guild) and/or *anjoman* (formal trade association) which, in turn, has membership of the *etehadia* (the national apex organization or association).

For a variety of reasons senfs, anjomans, and the etehadia representing them, and the senfs' constituent businesses, have persisted, some for hundreds of years and despite the recurring periods of turmoil and instability and continued to represent and protect the interests of their constituent enterprises in licit, productive, and resilient economic activity. Recognizing the importance of traditional forms of organization in business activity, Afghanistan Public Policy Research Organization (APPRO) has initiated a research programme to map and analyze the activities, economic contributions, and needs of bazaar-based (clustered) businesses in major cities of Afghanistan. This programme commenced with a pilot study of traditional clusters in Herat, concluded in September 2011.[1]

A key finding from the Herat pilot study was that knowledge was practically nonexistent on the role of senfs while little was known about anjomans and the national etehadia other than the fact that they existed. As with Herat, in Kabul, Mazar-e Sharif and Charikar (Parwan) there are numerous clusters of ironmongers, carpenters, carpet weavers, butchers, furniture makers, mechanics, agri-food processors and retailers, printers, tailors, and pottery workshops. Senfs, anjomans, and the national etehadia and its provincial branch offices have played and continue to play a pivotal role in representing the interests of their constituent micro and small-sized enterprises (MSSEs) at the municipality levels of governance and sustaining the apprenticeship mechanisms in the trades they represent. Continued analysis of data from similar studies is likely to generate much needed additional systematic knowledge about the traditional forms of business organization in the broader economy, the extent of their positive and legitimate contributions in generating livelihoods, their internal sustenance mechanisms such as apprenticeship arrangements, access to finance, and technology requirements. Continued analysis can also highlight the value adding economic activity of clustered enterprises more broadly and, hence, their contributions to economic growth and social stability.

This report is based on research carried out for GiZ's TVET programming, to examine how apprenticeship arrangements are made in different senfs and etehadias in selected bazaars and traditional economic clusters in Kabul City, Mazar-e Sharif (Balkh) and Charikar (Parwan). The rationale for this research was that interventions to regenerate and expand economic activity in major population centers could benefit from a systematic and as in depth as possible understanding of the role of senfs, anjomans, and etehadias in enabling Micro and Small-sized Enterprise (MSSEs) to persist despite the chronic conflict and over many generations. Further, the research sought to identify entry points for intervention through programming to strengthen and mainstream the role of senfs, anjomans, and etehadias in facilitating the upgrading of traditional apprenticeship arrangements prevalent among bazaar-based

[1] See APPRO (2012). *Traditional Economic Clusters and Reconstruction in Afghanistan: The Case of Herat*, available from: http://www.appro.org.af/Publications.html

Bazar Study Report

(clustered) enterprises.

This report consists of two parts. The first part provides an in-depth analysis of the institutional setting of the senfs in the three locations of the study. The second part focuses on the micro-dynamics and cluster properties of the various trades selected for this study.

The first part is structured as follows. The next section describes the objectives for this research while Section 3 outlines the methods employed in collecting the data. Section 4 provides an overview of TVET programming with a focus on Afghanistan based on a review of the literature. Section 5 provides an overview of the traditional form of industrial organization in the three sites for this research (Kabul, Mazar-e Sharif, and Charikar). Section 6 describes the findings from the analysis of the survery data. Section 7 highlights the key findings from the analysis while Section 8 concludes with recommendations.

The second part of the report focuses exclusively on the cluster properties. A detailed outline of the contents is provided at the beginning of the second part.

Part I: Institutional Role of Senfs and Etehadias

2. Objectives

This research sought to establish how the traditional apprenticeship system works. The analysis of the baseline data collected through interviews, focus group discussions, and surveys of both master traders and their apprentices were used to identify entry points for intervention through programming to strengthen and mainstream the role of senfs, anjomans, and etehadias in facilitating the formalization of traditional apprenticeship arrangements prevalent among SMEs in bazaars and traditional economic clusters.

The sites of this study were selected bazaars and traditional economic clusters in Kabul City, Balkh City and Charikar.[2] The current focus of GiZ's TVET programming is IT retailing and repair, business administration, vehicle mechanics, construction trades, ironmongery, and electrical work. As much as possible, the selection of the senfs for this research was done based on GiZ's current focus. The objectives for this research were to:

- Explore and document the internal organization of senfs (traditional guilds) and anjomans (formal associations)
- Explore and document the external networking of senfs and anjomans and their relations with the national etehadia in Kabul and the provincial offices of the national etehadia
- Explore and document the apprenticeship systems within selected senfs
- Compile a quantitative dataset to provide statistically significant information on senfs and their constituent MSSEs
- Compile a quantitative dataset to provide statistically significant information on apprentices in each selected senf
- Establish the training needs of the selected senfs, and

[2] It should be noted that businesses in the bazaars in major population centers in the provinces may or may not be organized in anjomans and if they are, the constituency of the anjoman is likely to be very small, particularly in smaller urban centres or rural areas.

- Make recommendations for consideration by GiZ in TVET programming.

The findings from this research combined with APPRO's ongoing work, GiZ's programming to date, and future studies on traditional forms of economic organization are intended to provide a reliable reservoir of information to inform economic development policy making and programming by GiZ and other stakeholders in various population centers of Afghanistan.

3. Methodology

The research was carried out using a mixed methods approach consisting of a review of the available reports and other documents, a mapping exercise, semi-structured interviews, and surveys as follows:

Document Review – Relevant documents on TVET programming and the traditional forms of industrial organization in Afghanistan and other less developed countries were reviewed to highlight what is known about apprenticeship arrangements and whether or not attempts have been made to mainstream and formalize these arrangements. The review drew on national level data where possible. As accurately as possible, estimates have been made of the number of bazaars, number and types of enterprises, number of employees per enterprise, and number of apprentices.

Mapping – A map was generated based on the information collected through interviews and observation (Figure 1). In addition, information was collected to gain in-depth insight into the working of senfs, anjomans, and etehadias. The apprenticeship system for each selected senf was documented with a focus on:

- details on entry requirements for apprenticeship candidates,
- training regulations and requirements,
- length of apprenticeship programmes,
- qualifying tests, if any, taken by apprentices at the end of their training, and
- differences between different senfs regarding apprenticeship programmes.

The maps are intended to serve as a main tool to explore possibilities of reengineering or simplifying and strengthening the apprenticeship processes and to assess progress and impact of reform through formalization, if formalization efforts are undertaken. It has to be noted that it is not unusual for apprentices to be under-aged children who are illegally enlisted in the labour market.[3] The maps are also to serve as a key tool to highlight possible entry points for interventions to address the current illegal status of some of apprenticeship arrangements.

Semi-structured Interviews – Key informant interviews with individuals drawn from the selected senfs and *Etehadia Melli Pishawaran – Afghanistan* (the national Trades Congress) were used to map the organization of trades and also to gather additional contextual information. The interviews also served as the basis on which to design the survey questionnaires. (See the appendices to this report for the survey forms and guiding questions.)

Surveys – In consultation with GiZ, APPRO selected six senfs in each of the following cities: Kabul, Mazar-e Sharif and Parwan. The criteria for the selection of the senfs were the focus of GIZ's TVET programming, proximity of GiZ's TVET schools to the eligible senfs, identifiability of the craft, and size of population centers. This study selected ironmongers, carpenters, mechanics, leather makers, motorcycle repairers, refrigerator repairers, radio and television repairers, metal workers, tinsmiths and the women's crafts industry of Istalif (Table 1). An additional selection criterion was membership in the Etehadia Milli Pishawaran Afghanistan (the national Trades Congress). The sampling was carried out at the senfs that met all these criteria. The fieldwork was carried out between May and November 2012.

Two separate surveys were conducted in each senf, one with craftsmen registered with the etehadia and one with all apprentices identified in the workshops. To obtain statistically significant information for etehadia-registered craftsmen the number of craftsmen and

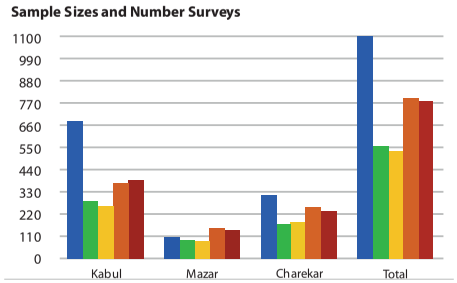
[3] The labour code of Afghanistan allows children from 14 years of age to work and be apprentices.

apprentices were estimated based on the information gathered from the key informant interviews. In Kabul a much higher number of craftsmen are registered with the etehadia than Mazar-e Sharif and Charikar. The exact number of surveyed etehadia members were calculated with a 10% error margin and 95% confidence level assuming a normal distribution.[4] The 10% margin of error is justified, because it is a population group that is very specific and relatively homogeneous, allowing for the findings to be adequately representative (Table 1) and (Figure1).

Table 1. Sample Sizes and Number Surveys

Location	Type of senf	Registered Craftsmen	Sample Size Craftsmen	Sample Size Apprentices	Nr of surveyed Craftsmen	Nr of surveyed Apprentices
Kabul	Ironmongers	52	34	51	35	56
	Leather makers	30	24	38	16	6
	Mechanics	100	50	66	54	93
	Motorcycle fixers	100	50	66	50	71
	Refrigerator fixers	150	59	73	48	87
	WCIoI	250	70	81	62	70
Mazar-e Sharif	Carpenters	10	10	17	10	21
	Ironmongers	25	21	34	21	30
	Mechanics	15	14	24	18	34
	Metalworkers	15	14	24	14	28
	Radio & TV fixers	20	17	29	13	19
	Refrigerator fixers	20	17	29	10	9
Charekar	Carpenters	34	26	41	24	21
	Ironmongers	30	24	38	23	29
	Metalworkers	67	40	57	44	67
	Refrigerator fixers	5	5	10	5	7
	Tinsmiths	30	24	38	22	26
	Vehicle Mechanics	150	59	73	59	92
Total					**528**	**766**

Figure 1. Sample Sizes and Number Surveys



[4] The sample sizes were calculated using the following standard formulas: $n = {}^{Nx}/_{((N-1)E^2 + x)}$ where n is sample size, N is the population size, x is a coefficient, and E is the margin of error. Margin of error E is calculated as: E=Sqrt[${}^{(N-n)x}/_{n(N-1)}$]. Coefficient x is calculated as: (3) $x = Z({}^{c}/_{100})^2 r(100-r)$ where $Z({}^{c}/_{100})$ is the critical value for the confidence level c and r is the fraction of responses of interest.

The head of the national etehadia provided the list of heads of the different senfs while the heads of the different senfs provided the contact details of the craftsmen registered with the etehadia. There is a difference between the number of surveyed apprentices and craftsmen and the calculated sample size. The registration list of the craftsmen with the etehadia is not up to date. In some cases the estimates of the total craftsmen registered with the etehadia were higher than the actual number of craftsmen because some of the registered entities had gone out of business.

4. TVET in Afghanistan – An Overview

Afghanistan is one of the world's least developed countries with a young and mostly unskilled labour force growing at an annual rate of around 400,000.[5] The per capita gross domestic product (GDP) was $528 in 2010/11 with more than a third of the population living below the poverty line while more than half are vulnerable and at serious risk of falling into poverty. Illiteracy is estimated at around three-quarters of the population.[6] Unemployment is estimated as being between 30 and 40 percent of the total workforce, which is roughly 50 percent of an estimated 25-30 million inhabitants.

The Government of Afghanistan envisions "an education sector that engenders a healthy workforce with relevant skills and knowledge as a key to long-term economic growth".[7] Technical and vocational training are crucial components in the Afghan National Development Strategy and form part of the National Priority Program 1. One of the main reasons for the Government of Afghanistan to fund and support the expansion of Technical and Vocational Education and Training (TVET) is to absorb a number of those students who fail to enter universities due to the large number of high school graduates and insufficient number of places

[5] Samuel Hall Consulting (2012). Afghanistan: Time to move to Sustainable Jobs – Study on the State of Employment in Afghanistan. (Kabul: Samuel Hall Consulting).
[6] World Bank (2012). Transition in Aghanistan: Looking beyond 2014. (Kabul: World Bank)
[7] Government of Afghanistan (2007). *Afghanistan: National Development Strategy 1387-1391*, page 113. Available from: http://www.undp.org.af/publications/KeyDocuments/ANDS_Full_Eng.pdf, accessed June 12, 2012.

at universities.[8] Another key concern is the high rate of unemployment and insufficient capacity to provide education and skills training as a means to increase human capital and hence employment possibilities.[9] TVET programming in Afghanistan is expected to reduce the number of unskilled and uneducated young people, expand the skills base in the labor force, and thus contribute to longer economic development needs of the country.

TVET comprises formal, non-formal, and informal learning for the young, women, and men to enable them to work in a wide range of institutional and work settings and in diverse socio economic contexts.[10] UNESCO has been leading the global debate on how to advocate and rethink TVET programming to better fulfill its role in developing more equitable and sustainable societies. As part of UNESCO's efforts, the Third International Congress on Technical and Vocational Education and Training (TVET) was held in Shanghai, People's Republic of China, during May 2012. The goal for this congress was "transforming TVET [and] building skills for work and life". The tasks for the congress participants were to examine the role of TVET in inclusive and sustainable development and the transformation of TVET for "better work, life and lifelong learning."[11]

Of key concern for the congress organizers and participants was the combined pressure on TVET programming from accelerated socio-economic, political, and demographic change resulting in growing youth unemployment, persistent and widening inequalities across and between countries, increased interdependency as a result of global economic integration, pressures on the natural resources due to unsustainable use of resources and climate change, and the implications of new information and communication technologies for employment.

[8] Government of the Islamic Republic of Afghanistan. "National Education Strategic Plan for Afghanistan", available from: http://www.iiep.unesco.org/fileadmin/user_upload/News_And_Events/pdf/2010/Afghanistan_NESP.pdf, accessed June 20, 2012.
[9] Islamic Republic of Afghanistan, "Education Joint Sector Review 1391/2012 – Technical and Vocational Education and Training – Sub-sector Report" June 2012.
[10] This was the defnition used during the Third International Congress on TVET, held in Shanghai under the title: "Transforming TVET: Building Skills for Work and Life." The Congress was organized by UNESCO with support from ILO, World Bank, Asian Development Bank, OECD, World Health Organization, and European Training Foundation. For additional detail see: http://www.unesco.org/new/en/media-services/single-view/news/building_skills_for_work_and_life/.
[11] See: http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/pdf/Final_General_Report_English.pdf. The summary of the proceedings and outcomes of the Congress reported here are also based on this document.

This concern would only be addressed through a re-examination of the conceptualization, governance, funding, and organization of TVET. There was consensus that the approach required for meeting these challenges would need to be based on a re-examination of the dominant models of development and training and a shift of focus from short term, ad hoc programming to longer term, integrated programming in delivering TVET objectives.

Some of the most pressing issues identified during the Congress for the future of TVET were as follows:

- **New paradigm for TVET**: Skills development programming should be demand driven
- **Policy coherence and governance**: A new paradigm for TVET will require active involvement of relevant actors such as industry, ministries of education, workers' guilds and associations, and civil society organizations in the design and delivery processes of TVET
- **Social equity and inclusion**: New ways must be found for TVET to be more inclusive of the vulnerable in society such as young women
- **Integrated policy making in skills development**: TVET should become a more integrated component of general education
- **Research and TVET policy**: New research on skills development patterns is needed to contribute to the knowledge base of the TVET policy makers.

These and other issues such as context relevancy, efficiency and effectiveness in programme implementation, measurable impacts, and sustainability continue to present challenges for donors such as GiZ with a mandate to support TVET programming in Afghanistan over the longer term. The current TVET system needs to become a demand-, rather than supply-, driven system. As such, efforts must be made to establish the current skills needs of the labour market and develop more modular / tailor-made skills transfer projects. Doing so will require a significant degree of autonomy for the entities that provide the training and keeping the training contents current by contracting out the training and engaging industry and the private sector as providers *and* beneficiaries of TVET programming.[12] These and other issues are also

[12] See, for example, World Bank (2008).

identified in a recent assessment of TVET programming in Afghanistan.[13] Key issues identified by the report include:

- Gaps between TVET programmes and market needs, resulting in a supply-driven approach to programming that fails to meet the demand for skills in the Afghan job market
- Insufficient emphasis on elevating proficiencies in existing trades/occupations
- Insufficient and inadequate training for emerging trades/occupations
- Little or no attention to the provision of supervisory or middle management skills training
- Insufficient investment in language skills beyond functional "street level" English, leaving an unmet demand for competent interpreters, researchers, and business personnel who could facilitate access to international markets
- Insufficient investment in more sophisticated forms of computer usage for basic information search and research, learning, and outreach / advertising, and
- An apparently complete neglect of promoting collaborative initiatives with the private sector in offering TVET.

The report concludes that the "stability-focus" of international assistance to Afghanistan since 2009 has failed to institutionalize interventions such as TVET as sustainable initiatives:

> Both TVET providers and government stakeholders expressed frustration with donors' continuously starting initiatives that stop when funding ends, while bypassing opportunities to invest in existing local entities with demonstrated staying power. While many TVET providers have capacity and resources to institutionalize some donor-initiated approaches, the issue of sustainability [is not addressed] by the donor[s].[14]

Examples of emerging skills and occupations needed but not yet recognized as such in TVET programming in Afghanistan include: professional level interpreter/translator training and

[13] For the full report, see: DAI (2011), Afghanistan Technical and Vocational Education Training (TVET) Providers Inventory, (Kabul: DAI). These findings are consistent with an earlier report by the Asian Development Bank (2008) *Best Practices in the Promotion of Small & Medium Enterprises through Technical & Vocational Education & Training Afghanistan* (Kabul: MoLSAMD), and the Committee on Education and Skills Policy (2010), *Technical, Vocational Education and Training in Afghanistan – and Overview*, available from: www.cesp.gov.af/anqa/Documents/TVET_Overview.pdf

[14] DAI (2011), page 25.

certification and mid- to high-level skilled trades training in construction, modern equipment repair (e.g., office equipment, manufacturing equipment, air conditioning), and medical equipment repair. The report concludes that future programming in TVET will need to be demand driven and capable of producing qualified workers while being mindful that the newly trained personnel have immediate and sustainable employment prospects. With employment prospects being a key concern for all manner of skills training the world over, the report calls for intensified efforts to engage the private sector as a direct beneficiary of TVET. Private sector actors must recognize, and act accordingly, that taking on TVET-trained apprentices is not a concession or favour to the TVET programme implementers but something that adds value to their productive capacity.[15]

There have been some studies on the traditional forms of apprenticeship in Afghanistan. For example, a recent study focused on Kunduz City and Imam Shahib in Kunduz province finds that traditional bazaars and their clusters are part of an intricate socio-economic network consisting of key actors, apprenticeship arrangements, supply lines, (undocumented) regulations governing day-to-day activities, discernible physical and organizational structures, and an assortment of goods being offered. Traditional apprenticeship arrangements, while widely acknowledged as existing, have no guidelines on skills contents, qualification or certification requirements and thus no form of formal examination. The apprentices are usually family members or introduced through a family member acquainted with a potential master tradesman. Without social network connections, it is difficult to secure apprenticeship placements. The training period varies from trade to trade and can take between 1 and 12 years. The age range for the apprentices is between 10-25 years while wages vary between 20-100 Afghanis a week for new apprentices and between 500-1,000 Afghanis for more senior apprentices. The stages and timings of the apprenticeship processes are undefined and vary between trades.[16]

[15] These linkages are also emphasized in Nayar, R. et al. (2012), *More and better jobs in South Asia*. (Washington D.C.: World Bank).

[16] See Yarashm, N. and K. Mielke (2011). *The Social Order of the Bazaar: Socio-economic embedding of Retail and Trade in Kunduz and Imam Sahib*. Zentrum für Entwicklungsforschung Center for Development Research (ZEF) - Working Paper Series 79. (Bonn: University of Bonn).

Major technical challenges for TVET programming in Afghanistan and elsewhere include the recognition of informally-acquired skills, recognition of certificates obtained from private institutes, linkages between education and training programmes, possibilities to move from one programme to another, and quality control.[17]

In the case of Afghanistan, there is a poorly skilled labour force while an overwhelmingly traditional economy with micro and small, low-skill enterprises accounts for 80-90 percent of the total economy, making it very difficult to generate reliable statistical information on existing and required skills. There is, however, evidence of increasing demand for skilled and semi-skilled workers. To meet this demand stock needs to be taken of the current educational profile of labour market participants and entrants and the existing capacity and infrastructure to efficiently and effectively provide technical and vocational education and training.

A study conducted by the World Bank finds that the educational profile of labour market participants and entrants is low while the capacity to provide training lacks in content, is of poor quality (high trainee to trainer ratio, time-based programmes as opposed to competency-based programmes, abstract as opposed to applied training, lack of adequate equipment, and lack of quality control), lacks relevance to labour market needs (largely supply-driven), and suffers from duplication, poor planning and management, inadequate regulation, and uncertain or limited financing.[18] The Ministry of Labour, Social Affairs, Martyrs and the Disabled (MoLSAMD) has evaluated TVET programming in Afghanistan as poor.[19]

[17] Schur, W. (2011). *New Skills for Afghanistan,* in *Non-formal Skills Training: Adult Education for Decent Jobs and Better Lives - Supplement*, Institut fuer International Zusammenarbeit des Deutschen Volkshochschul Verbandes (DVV International).
[18] World Bank (2008). Annex for a propose grant for the Afghanistan Skills Development Project. (Kabul: World Bank).
[19] MoLSAMD (2009). *Baseline Data for the Quality of TVET Provision in Afghanistan.* (Kabul: MoLSAMD). This report gives a score of 37% to Afghanistan against evaluation criteria defined by the Asia-Pacific Accreditation Certification Commission.

Box 1. Regulatory Context of TVET[20]

The Law on Education adopted by the Cabinet of Ministers in 2008 outlines the general principles of education in Afghanistan. Article 5 of the Law stipulates that public technical and professional, vocational and artistic education is free of charge.

The National Skills Development Plan (NSPD), signed by the President of Afghanistan in Berlin in 2004, is to contribute to socio-economic recovery through the development of a national TVET system responsive to the needs of the labour market and capable of providing the population of the country with skills and knowledge for decent employment. NSPD consists of 2 components:

- Funding of short-term vocational training for building the TVET system, and
- Development of National Occupation Skills Standards (NOSS), assisting in the development of a National Qualifications Framework (ANQF), and building the capacity of trainers and training providers.

Article 20 of the Law on Education sets out the objectives of TVET programming in Afghanistan as follows:

- Train human resources in technical-professional, vocational and artistic fields needed by the society and international market, taking into consideration national and international standards with special concern to the needs of women;
- Develop and expand knowledge and skills through theoretical and practical training in the fields important for national development;
- Provide special education for blind and disabled people in relevant fields;
- Prepare students to be admitted to tertiary level institutions and universities.

The Afghan Ministry of Education sets the following targets to TVET programming:

- Increase access to TVET through the establishment of new institutions such as regional institutes from 16 to 32, provincial schools from 38 to 102 and district school to 364 during the years 2009-2014
- Increase the enrolment and training of TVET students from 19500 in 2009 to 150 000 in March 2014:
  - Increase female participation in TVET to 30%, and
  - Increase disabled participation in TVET to 1000 students.
- Develop teachers' capacities for delivering better services:
  - Make sure that 40% of the TVET teachers pass competency based exams up to 2014, and
  - Make sure that 80% of the TVET teachers are using active participation methodology.
- Provide quality and market-aligned curriculum and training materials to the students, and
- Equip schools with quality and market-aligned equipment.

Retrospective studies of international intervention in the labour market of Afghanistan strongly suggest that these interventions have been ignorant of the market dynamics, negligent with respect to domestic value chains, poorly coordinated, and limited in their national scope and length of time. In addition, the interventions appear to have been focused on creating temporary jobs rather than sustainable or longer term employment.[21] Traditional forms of apprenticeship in less developed countries are often the only means through which to learn new skills and find relatively skilled jobs. Ninety five percent of skills transfer and training in

[20] Sources: UNESCO-IBE (2011). *World Data on Education*, chapter VII, Islamic Republic of Afghanistan. (Geneva: UNESCO-IBE); Ministry of Education, http://moe.gov.af/en, National Skills Development Programme, http://www.nsdp.gov.af/; and http://www.unevoc.unesco.org/wtdbase_prev3.php?ct=AFG.
[21] Samuel Hall Consulting (2012). Afghanistan: Time to move to Sustainable Jobs – Study on the State of Employment in Afghanistan. (Kabul: Samuel Hall Consulting).

Afghanistan's workforce occurs on the job.[22] However, these forms are not always optimal in terms of quality, standards, or working conditions.

Three key considerations need to be addressed in attempts to improve traditional apprenticeship systems. First is to understand how skills upgrading introduced from outside of the context through foreign aid-supported TVET programming should be adapted to resonate with pre-existing skills and apprenticeship arrangements. Second is to maintain an environment where tacit knowledge, often difficult to transfer through formal mechanisms but crucial to learning, could continue to be transferred.[23] Perhaps because of the role of tacit knowledge in learning and the hands-on nature of traditional forms of apprenticeship, some have argued that upgrading traditional apprenticeship forms is more effective than formalization.[24] Finally, almost all the literature on TVET programming points to the importance of post-TVET employment opportunities. Attempts to reconceptualize TVET programming, as called for in the third international Congress in Shanghai, should thus also focus on the interface between TVET outcomes, i.e., the graduates, and the absorption capacity of the labour market. These and related issues guide the analysis in the remainder of this report.

The next section reports on the findings from the analysis of the quantitative and qualitative data collected for this research.

5. Industrial Organization in Kabul, Mazar-e Sharif, and Charikar

The following descriptions are provided to shed light on how traditional industry is organized in Afghanistan:

- The Etehadia Melli Pishawaran (National apex organization of different crafts) annually reports to Shura Markazi Pishawaran (National apex Committee). Shura Walayati Pishawaran (Provincial apex organization of different crafts) reports to Etehadia Melli Pishawaran directly and, by default, also to Shura Markazi Pishawaran on an annual basis.
- The Shura Walayati Pishawaran (Provincial apex organization of different crafts) is in charge of leadership for the local Etehadia and not led by Etehadia Melli Pishawarna.
- There are 17 Shura Walayati Pishawaran (Provincial apex organization of different crafts) in Afghanistan, with one located in each province but there is one Etehadia Melli Pishawaran (National apex organization of different crafts).
- The Etehadia Melli Pishawaran (National apex organization of different crafts) is located in Kabul but the Shura Walayati Pishawaran (Provincial apex organization of different crafts) is located in different provinces.
- The Etehadia Walayati Pishawaran (Provincial apex organization of different crafts) reports to the Etehadia Melli Pishawaran (National apex organization of different crafts) and the Shura Walayati Pishawaran (Provincial apex organization of different crafts).

Number of Enterprises	Number of Employees	Number of Apprentices	Number of Senfs	Number of Workshops per Senf	Number of Craftsmen	Number of Occupations	Average Age of Apprentices
150,000	450,000	1,060,000	100	50-10,000	530,000	300	12-20 years

Source: All numbers are estimates provided by Hassan Sepahi, President of AMPA and Head of Craftsmen / Traders National Union of Afghanistan.

Congress:

A Congress is a periodic gathering by the national representatives of craftsmen from different provinces. A Congress is normally held every three years but more frequently if there are emergencies. The representatives are selected, in the first instance, at the district level. At the district level one representative is selected per up to 50 enterprise operators. At the provincial level, one person is selected per up to 200 enterprise operators. In the last Congress held in Kabul there were 300 craftsmen representatives from the different provinces of Afghanistan. The topic of this last Congress was the statute and elections for the General Directorate and Local Directorate positions. There have been three Congresses held since 1987.

[22] MoLSAMD (2008). An Urban Area Primary Source Study Of Supply & Demand in the Labor Market. (Kabul: National Skills Development Program).

[23] ILO (2008). Skills development for industrial clusters: A preliminary review. Employment working paper No 8, available at: www.ilo.org/public/english/employment/download/.../wp8.pdf

[24] See, for example, ILO (2011). *Upgrading Informal Apprenticeship Systems*. International Labour Office Skills for Employment Policy Brief.

Etehadias / Anjomans

Etehadias / Anjomans are equivalents of craftsmen unions, each with its own statutes and procedures. Membership in Etehadias / Anjomans is voluntary. The membership fee for Etehedais / Anjomans is 30 to 50 Afghanis per month, after the payment of a one-time fee of 150 Afghanis to acquire the Etehadia / Anjoman membership card.

Senfs:

Senf (class or trade or guild) refers to same or similar trades grouped together. Examples are woodworkers, different types of mechanics, ironmongers, construction workers, electricians, and so forth. A substantial number of MSSEs of the same craft, whether clustered or not, are categorized according to their senf to which they belong. A senf is not a physical entity and not formally registered.

Workshop:

A workshop is a set. It has one or more teachers along with students who are working on the same craft. For example; Carpentry workshop, Ironmongery workshop.

Apprentices:

There are two forms of apprenticeship: pre-apprentices and formal apprentices. Pre-apprentices, normally boys of 8-12 years of age, are placed by their parents in a workshop to learn a trade. The boys are paid a nominal 10-30 Afghanis per day and their daily food and travel expenses are paid by the enterprise owner. Older boys wishing to pursue their learning of trades are appointed as formal apprentices, in which case they are paid a daily wage of between 50 and 500 Afghanis. The wage level depends on age, experience, and type of trade.

Figure 2a. Organizational Structure of Trades

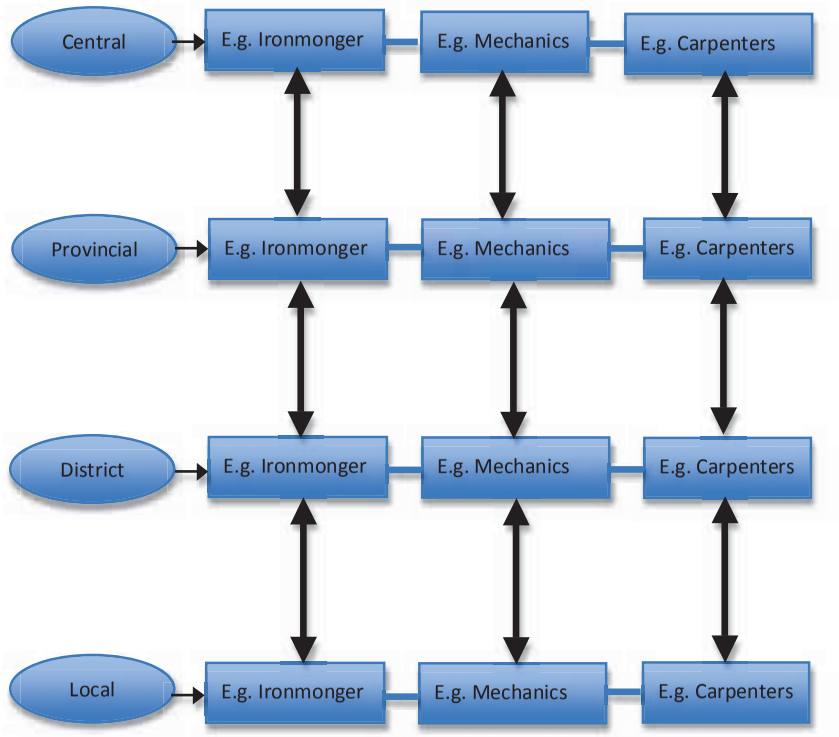
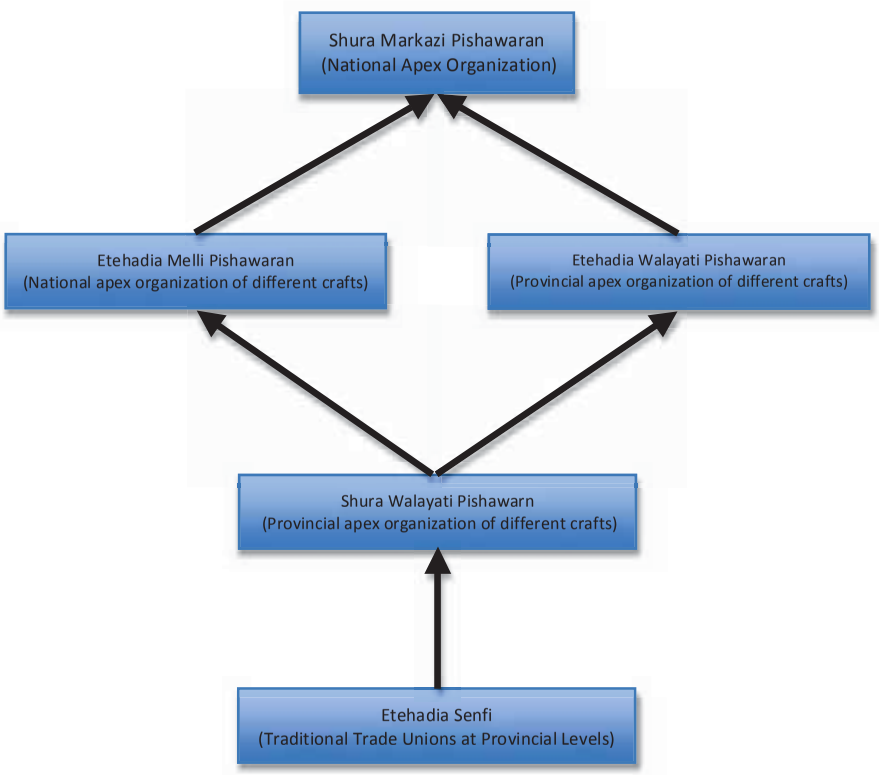


Figure 2b. Organizational Structure of Trades

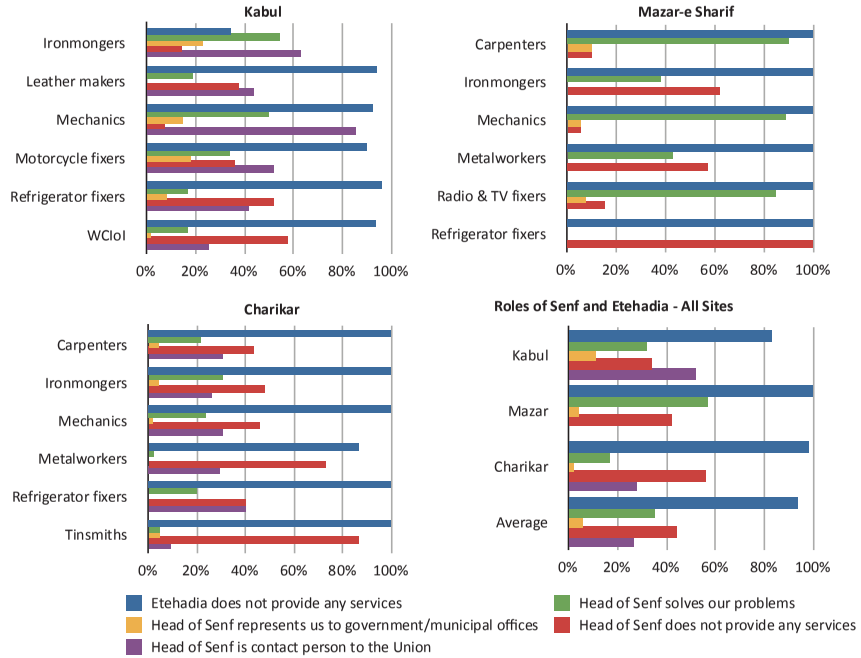


There are approximately 800 provincial etehadia senfi throughout the country and an estimated 150,000 bazaar companies nationally, of whom 75,000 are registered with provincial anjomans. There are 100 different types of production and 300 different types of jobs within these trades. The small enterprises with their apprenticeship system are the biggest – but officially unacknowledged – TVET training providers in Afghanistan. If we assume that there are, on average, 2 apprentices employed at each enterprise, this gives a total of about 1,060,000 young people being trained in the traditional (undocumented) apprenticeship system. This number is six times the training capacity of the formal TVET system of Afghanistan.

The national etehadia is headed by a director, based in Kabul, a deputy, and an executive committee. Provincial etehadias are headed by a provincial manager, assisted by a deputy and support staff. According to the survey respondents, the services of the etehadias appear to be minimal. The vast majority of the craftsmen claim that the etehadia is not doing anything for them directly. In Kabul the etehadia appears to have some value for the craftsmen. The head of the senf is much more valued, but the appreciation varies strongly from senf to senf and from location to location (Figure 3).

Roles of Senf and Etehadia	Kabul	Mazar	Charikar	Average
Etehadia does not provide any services	83%	100%	98%	93.7%
Head of Senf solves our problems	32%	57%	17%	35.3%
Head of Senf represents us to government/municipal offices	11%	4%	2%	5.7%
Head of Senf does not provide any services	34%	42%	56%	44%
Head of Senf is the contact person to the Union	52%	0%	28%	26.7%

Figure 3. Roles of Senfs and Etehadia



In some instances craftsmen claim that the head of the senf does not do anything for them, but in other cases, especially in Kabul and Mazar-e Sharif, this claim was negligible. The most common reported tasks of the senf are to solve internal problems, and represent the craftsmen to governmental and municipal bodies as well as to the etehadia. Anjomans' focus and mandate are formal representation of their constituent trades to governmental bodies. In contrast, senfs and their heads are traditional entities and act very much like shuras, traditional forms for community governance with a focus on conflict resolution at the community level.

6. Descriptive Data

6.1 Profile of Apprentices

The average age of the survey respondents does not represent the reality of the ages of apprentices, as the standard deviation from the average is large. In Mazar-e Sharif the distribution is closest to normal. In all three locations there are apprentices as young as 7 or 8 year old while some apprentices are in their forties and fifties (Table 2). The young age of some apprentices is more frequent in the bazaars of Charikar. There is no notable age difference between the crafts, except for the Women Crafts Industry of Istalif (WCIoI) where apprentices are on average slightly older.

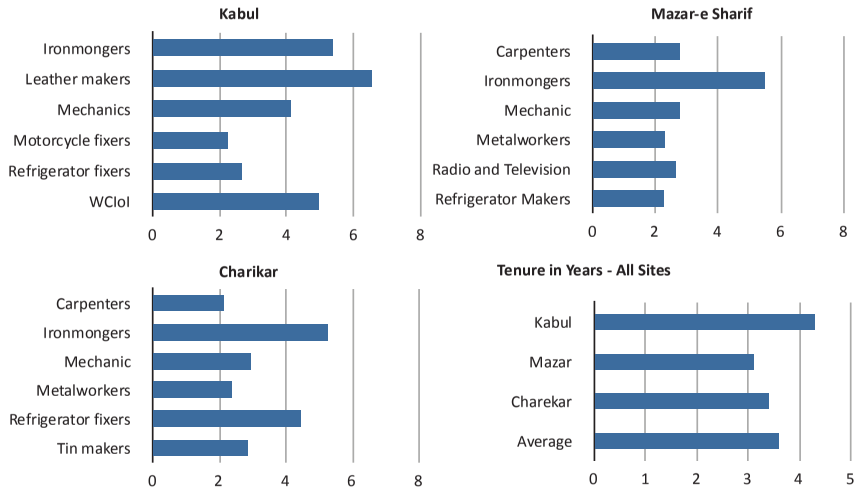
Table 2. Age and Tenure in Apprenticeships

Location	Type of Senf	Average Age (Min – Max)	Average Tenure Years (Max)
Kabul	Ironmongers	18.3 (8 – 35)	5.4 (30)
	Leather makers	17.7 (11 – 25)	6.6 (12)
	Mechanics	18.5 (10 - 43)	4.1 (18)
	Motorcycle fixers	15.8 (11 – 27)	2.2 (13)
	Refrigerator fixers	19.3 (13 – 40)	2.7 (10)
	WCIoI	24.0 (11 – 60)	5.0 (35)
Mazar-e Sharif	Carpenters	15.1 (11 – 20)	2.8 (7)
	Ironmongers	18.2 (11 – 50)	5.5 (13)
	Mechanics	15.3 (11 – 28)	2.8 (15)
	Metalworkers	15.8 (7 – 25)	2.3 (8)
	Radio & TV fixers	16.9 (10 – 30)	2.6 (9)
	Refrigerator fixers	19.3 (15 - 28)	2.3 (6)
Charikar	Carpenters	18.2 (14 - 29)	2.2 (7)
	Ironmongers	17.6 (7 – 50)	5.3 (30)
	Mechanics	16.0 (8 – 34)	3.0 (15)
	Metalworkers	16.6 (8 - 42)	2.4 (10)
	Refrigerator fixers	14.4 (9 – 20)	4.5 (18)
	Tinsmiths	13.0 (7 – 20)	2.9 (8)

There are not great variations in the average lengths of apprenticeship between different trades. The average lengths of apprenticeship periods are between 2 and 6 years. The apprentices in ironmongery spend more time in apprenticeship than other crafts. The deviation from the average is high, from just a few months up to 30 years or more, rendering averages not very useful as an indicator (Figure 4).

Average Tenure of Apprenticeships in Year	Average of tenure by years
Kabul	4.3
Mazar	3.1
Charekar	3.4
Average	3.6

Figure 4. Average Tenure of Apprenticeship in Years by Senf



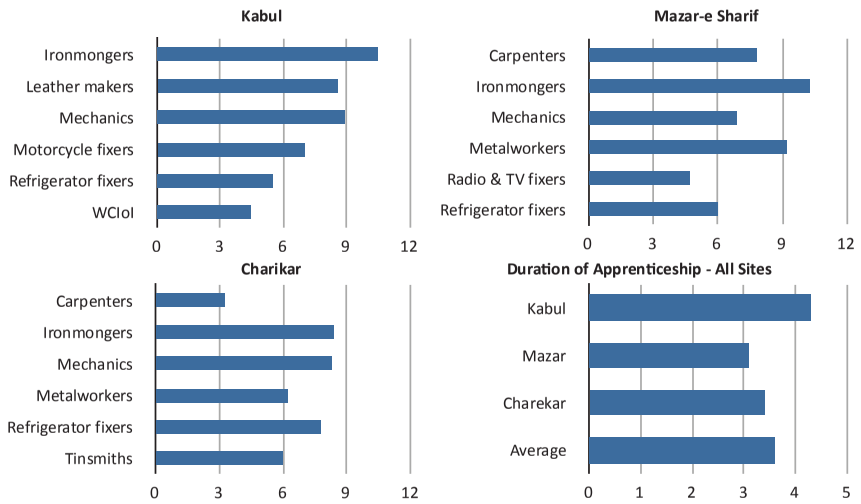
Across the three sites of this research the master traders worked comparable numbers of years as apprentices prior to becoming masters (

Years Master Worked as Apprentice	Kabul	Mazar	Charikar	Average
Years Master Worked as Apprentice	7.5	7.5	6.7	7.2

Figure 5). A simple deduction that may be made here is that more skills are involved in ironmongery as compared to the other trades. Significantly, leather makers appear to spend the longest time in apprenticeship as compared to all other apprentices. The third longest apprenticeship period is that of women learning various crafts at Istalif (Figure 5).

Years Master Worked as Apprentice	Kabul	Mazar	Charikar	Average
Years Master Worked as Apprentice	7.5	7.5	6.7	7.2

Figure 5. Years Master Worked as Apprentice



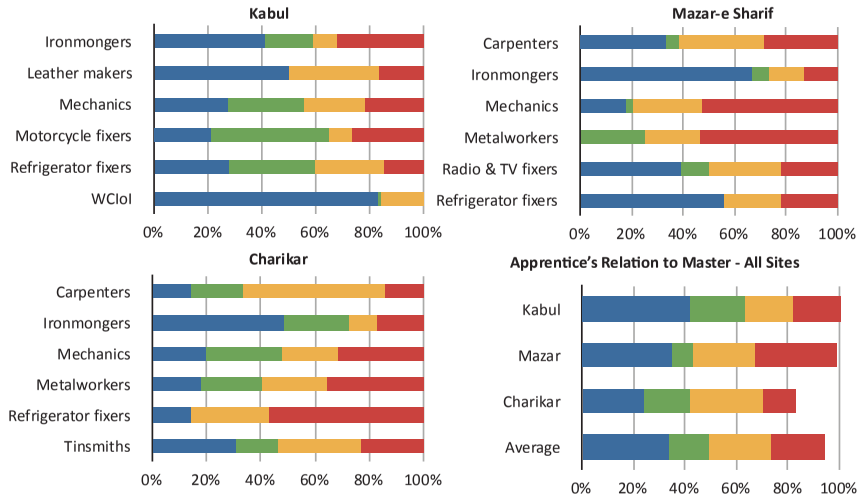
One might expect that in provincial areas or in more traditional crafts the apprentices would come from within the family. However, there seem to be no obvious differences between Kabul and the two provincial centers (Figure 6)

Apprentices Relation to the Masters	Kabul	Mazar	Charikar	Average
Family member	42%	35%	24%	34%
Friend	21%	8%	18%	16%
Relative	19%	24%	28%	24%
Unrelated	19%	32%	13%	21%

Figure . Of note is WCIoI, where up to 80 percent of the apprentices are family members of the masters. Family ties also play a significant role in becoming an apprentice in ironmongery in Mazar-e Sharif, Charikar, and Kabul. Other trades with family ties playing a significant role are leather making (Kabul), and radio and TV and refrigerator repairers (Mazar-e Sharif). Interestingly, no family ties were identified between the apprentices and the masters in metal working in Mazar-e Sharif.

Apprentices Relation to the Masters	Kabul	Mazar	Charikar	Average
Family member	42%	35%	24%	34%
Friend	21%	8%	18%	16%
Relative	19%	24%	28%	24%
Unrelated	19%	32%	13%	21%

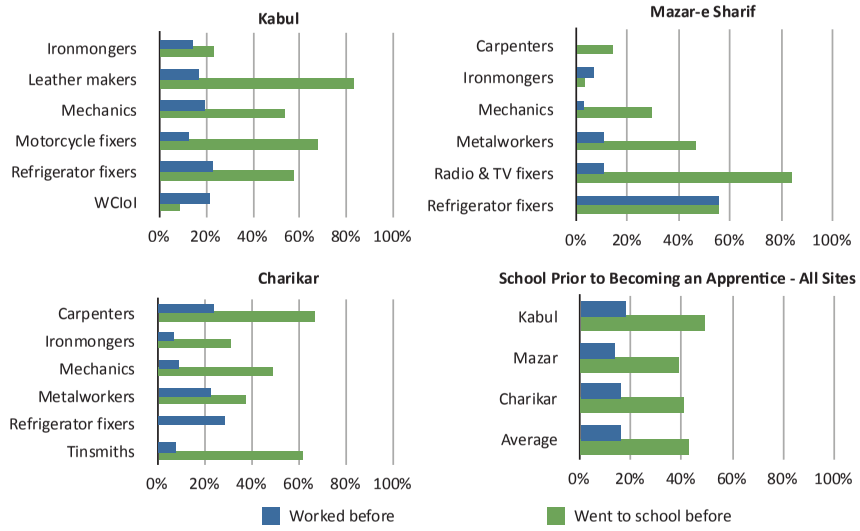
Figure 6. Relation to Master



Previous work experience prior to becoming an apprentice is the highest among refrigerator repairers in Mazar-e Sharif. Only a small percentage of the apprentices in all the other trades and locations had previous work experience prior to becoming an apprentice (Figure 7). A very high percentage of the apprentices were going to school prior to becoming apprentices, particularly in leather making, vehicle mechanics, motorcycle mechanics, and refrigerator repairers (Kabul), metal workers, radio and TV repairers, and refrigerator repairers (Mazar-e Sharif), and carpenters, vehicle mechanics, and tinsmiths (Charikar).

School prior to becoming an Apprentice	Kabul	Mazar	Charikar	Average
Worked before	18%	14%	16%	16%
Went to school before	49%	39%	41%	43%

Figure 7. School Prior to Becoming an Apprentice

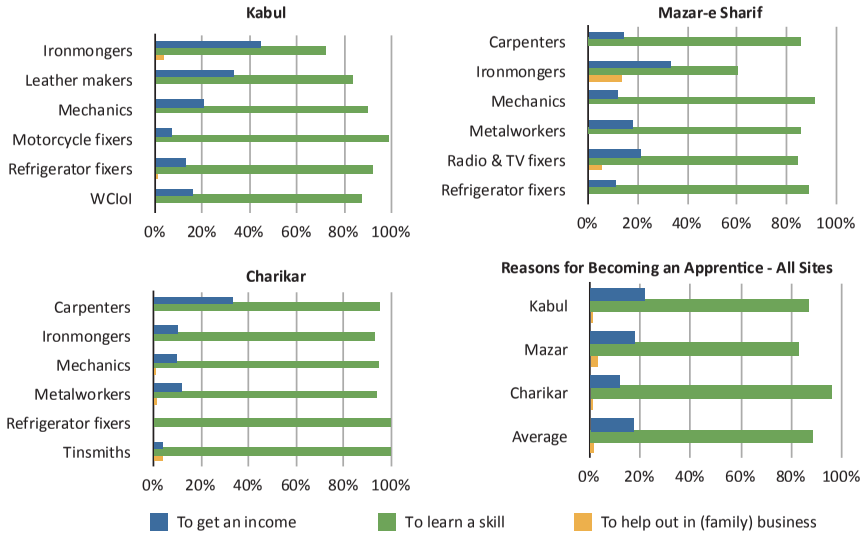


By and large apprentices went to school before starting their apprenticeship. Others indicated that they were too young to have been doing anything before starting their apprenticeship. There is no significant difference between those who went to school or worked before apprenticeship in terms of the reasons why they became an apprentice. For those who went to school before becoming an apprentice 90 percent wanted to learn a skill and 18 percent wanted some income. For those who worked before becoming an apprentice, the percentages were 90 percent and 21 percent, respectively.

The overwhelming majority of all apprentices become apprentices because they want to learn a new skill as a means to a steady source of income (Figure). Given the very close link between having a skill and finding a steady, skilled job, it is difficult to point to only economic reasons for becoming an apprentice. It may well be that in the first instance the wish to have a steady job is paramount. For those who have the social network support and the right social and kinship connections, it is possible to train for a skilled, steady trade through training as an apprentice.

Reasons for Becoming an Apprentice	Kabul	Mazar	Charikar	Average
To get an income	22%	18%	12%	17.3%
To learn a skill	87%	83%	96%	88.7%
To help out family business	1%	3%	1%	1.7%

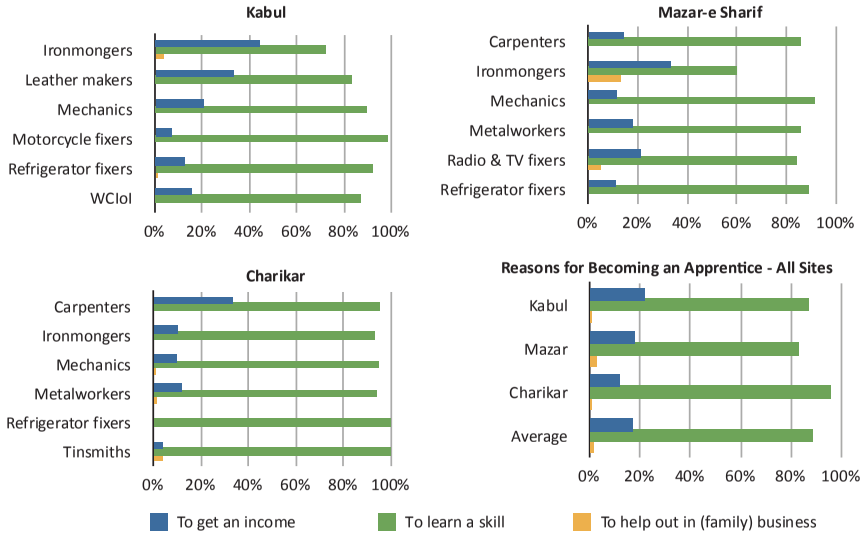
Figure 8. Reason for Becoming an Apprentice



The reasons for becoming an apprentice vary according to age group. Relatively low percentages of the apprentices in Kabul decided to become apprentices for an income. The vast majority of Kabul apprentices stated the reasons for becoming an apprentice as the desire to learn a new skill. The percentages for those who wanted to learn a new skill in Mazar e Sharif and Charikar are comparable to Kabul's. Two notable differences are a major drop in the age groups of over 35 years for both Mazar-e Sharif and Charikar and a spike in the number of people in the over 35 category who became apprentices only to earn an income (Figure 9).

Reasons to Become an Apprentice According to Age Group	Kabul	Mazar	Charikar	Average
To earn money	21%	45%	28%	31%
To learn a skill	85%	63%	74%	74%
Both	7%	8%	10%	9%

Figure 9. Reasons to Become an Apprentice According to Age Group



In both Mazar-e Sharif and Charikar there is a correlation between age and reasons to become an apprentice. Older persons start an apprenticeship to earn money whereas younger apprentices want to learn a skill. In the age category of above 35 years of age apprentices have been doing apprenticeships for up to 9 or 10 years. Together with the finding that people in this age category are doing the apprenticeship to earn money, this seems to suggest that older people are trapped in the apprenticeship system without the prospect of attaining a master's position and are possibly being used only as cheap labor (Figure 10).

Figure 10. Number of Years in Apprenticeship by Age Category

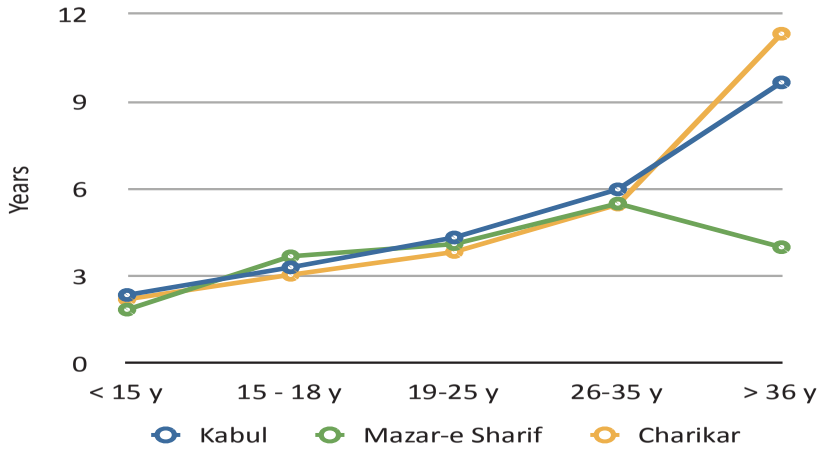
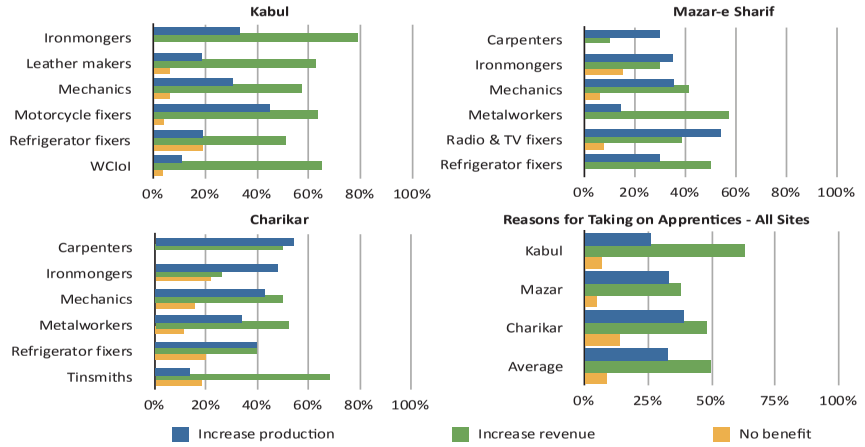


Figure 11 confirms that apprentices have economic benefits for their employers. Longer-term benefits such as the persistence and sustainability of the craft, though historically a given, was not stated as the reason for masters to take on apprentices, however.

Benefits of taking on Apprentices	Kabul	Mazar	Charikar	Average
Increase production	26%	33%	39%	32.70%
Increase revenue	63%	38%	48%	49.70%
No benefit	7%	5%	14%	8.70%

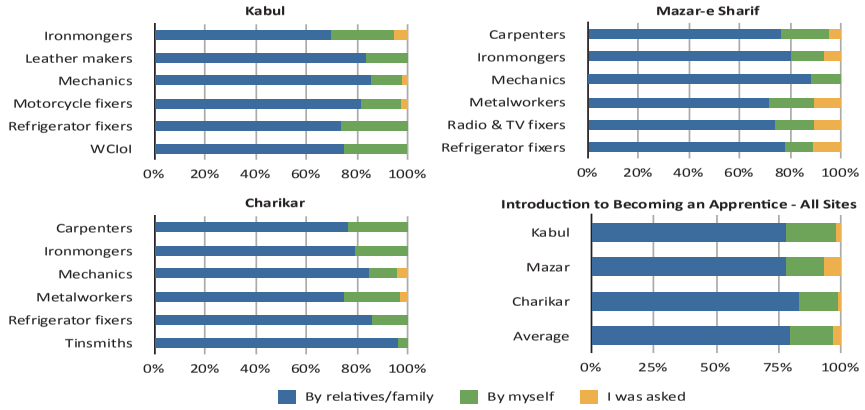
Figure 11. Benefits of Taking on Apprentices



The most common way of getting introduced to a master craftsman is through the mediation of a relative or family member (Figure 12).

How did you become an apprentice	Kabul	Mazar	Charikar	Average
By relatives/family	78%	78%	83%	79.7%
By myself	20%	15%	16%	17%
I was asked	2%	7%	1%	3.3%

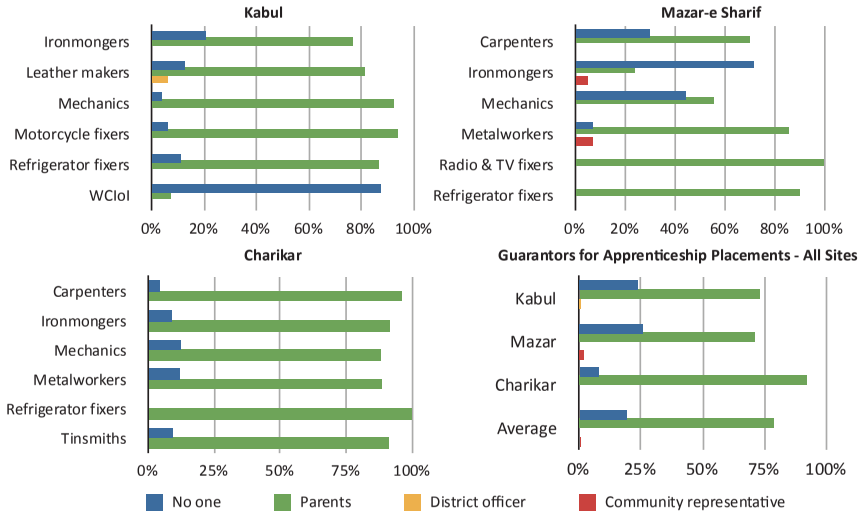
Figure 12. How Did You Become an Apprentice?



There are no formal requirements, such as a practical test, for entering apprenticeships. For younger apprentices doing their first jobs, the parents arrange the apprenticeship with the master and provide the necessary guarantees (Figure 13).

Guarantors for Apprenticeship Placements	Kabul	Mazar	Charikar	Average
No one	24%	26%	8%	19.30%
Parents	73%	71%	92%	78.70%
District officer	1%	0%	0%	0.30%
Community representative	0%	2%	0%	0.70%

Figure 13. Guarantors for Apprenticeship Placements



6.2 Apprenticeship Arrangements

The apprenticeship process varies from trade to trade though there are many similarities. To document the process in detail, additional focus group discussions were held with apprentices of ironmongers and car mechanics in Kabul, metal workers and carpenters in Charikar (Parwan), and TV repairers and refrigerator repairers Mazar-e Sharif. In addition, interviews were held

with 8 master traders to verify the data gathered through focus group discussions.[25] The findings from the focus group discussions and the interviews are reported in the remainder of this section.

6.2.1 Ironmongering Apprenticeship (Kabul)

Metalworking is divided into two main categories: working with cold metal and working with heated metal. Making metal objects such as hammer heads and axe heads fit into the category of heated metalworking while building buckets, charcoal stoves, basins, and scales (for weighing) fit into cold metalworking. The ironmonger apprentices in Kabul interviewed for this study all work in heated metalworking.

Apprenticeship in ironmongery commences with the apprentice being introduced to the master ironmonger by an older (male) family member. The introduction also represents a form of recommendation and guarantee by the older family member for the new apprentice. Typically, the family of the apprentice is known to the master as a relative, member of the same ethnic group, or neighbor. Previous knowledge on the background of the apprentice and also knowing senior members of his family serve as means to resolve any conflicts that may arise during the apprenticeship between the master trader and the apprentice.

The learning process begins with the apprentice being given menial but necessary tasks such as cleaning up and tidying up the work area, bringing water, breaking coal or charcoal for melting iron, and starting up the furnace. The apprentice also helps the master trader in assembling, disassembling, and holding molds to be filled with molten metal, and holding hot iron for the master to shape. As the apprentice becomes more and more involved in the ironmongery process, the master trader observes and makes suggestions to the apprentice for improvement. Much of the learning is a function of how much and how quickly the apprentice learns, and the ability to apply this learning. Based on his observation of the performance by the apprentice, the master trader decides on whether or not to delegate more complicated tasks or more

[25] These focus group discussions, two per location, and interviews with key informants where held during April and May 2013.

responsibilities to the apprentice. Learning these preliminary tasks usually takes between 6 months and 18 months.

Much of the learning is done by doing. As the apprentice learns more and becomes competent in applying his learning, he is streamed by the master into making various metal appliances and tools. The more talented apprentices become makers of precision tools such as metal cutting scissors. Others eventually learn how to make hammer heads, plough heads, axe heads, picks, and sickles.

The age range of the apprentices is between 8 and 20. Reasons offered for becoming a metalworking apprentice ranged from metalworking being a holy trade and practiced by one of Prophet Mohammad's close disciples, to the need to learn a marketable skill, to a liking of working with metal, to following in father's footpath, to the economic necessity of having to find a job. An estimated 60 percent of the apprentices go to school.[26] School is attended either before starting work or after finishing work.

Testing for apprentices consists of ongoing monitoring by the master trader of how the apprentice carries out and finishes various tasks which become progressively more and more complicated as time goes on. Some master traders test the skill level of the apprentice by giving him a piece of metal and asking him to make something of his choice. The test consists of the assessment by the master trader of the finished product. If successful, the apprentice then has a formal meeting with the master trader during which he pleads with the master trader to provide assistance for the apprentice to set up his own workshop. At this point the master trader gives his final verdict on the ability of the apprentice by agreeing and assisting or disagreeing and asking the apprentice to spend more time to learn. It can take an apprentice five or six years before he can graduate. Some apprentices take as long as 10 years before graduating.

[26] Interview with ironmongering master trader, Kabul, April 25, 2013.

There is a graduation ceremony if the apprentice passes the test and has the approval of the master trader to set up on his own. At the ceremony, the graduate buys new clothes for the master trader and cookies for the fellow traders as a sign of appreciation and the master trader offers some tools of the trade to be used in the new workshop to be set up by the graduated apprentice.

It is not at all common for the apprentices to work with other master traders in the cluster. Apprentices in the same workshop and also apprentices from different workshops are encouraged by the master traders to compete for learning purposes and also as part of the ongoing testing to graduate. There were no reports of maltreatment or physical abuse by the master traders. However, the master traders all concurred that if an apprentice made a mistake and spoiled materials or lost business for the workshop due to bad craftsmanship, the master trader would deduct the cost from the apprentice's wages.

There is a general sentiment in favor of setting up formal training centers, accessible to the apprentices and master traders. Some of the master traders feel that they must have, and know how to operate, new tools and machinery if they are to compete successfully with much cheaper imports from Iran, Pakistan, and China.

A strong recommendation by the apprentices was that if vocational training and education were to be provided, it would be best for it to be offered in the morning and before work as that was the best time for the students to learn. The primary reason for going to school is learning to read and write and to be able to take notes, make measurements, and do calculations. Some of the apprentices said that schooling would prepare them for alternative careers if they did not succeed in becoming a master ironmonger.

6.2.2 Car Mechanics Apprenticeship (Kabul)

Car mechanics is divided into different areas including engine repair, body repair, engine electrics and electronics, tire repair and wheel balancing, and car interior repair. Also, different

types of expertise are needed for repairing passenger vehicles and truck or buses.

Apprenticeship in car mechanics commences with the apprentice being introduced to the master mechanic by an older (male) family member or family friend. The introduction also represents a form of recommendation for, and guarantee of, the new apprentice. Typically, the family of the apprentice is known to the master as a relative, member of the same ethnic group, or neighbor. Previous knowledge on the background of the apprentice and also knowing senior members of his family serve as means to resolve any conflicts that may arise during the apprenticeship between the master trader and the apprentice.

The learning process begins with the apprentice being given menial but necessary tasks such as cleaning up and tidying up the work area, bringing water, and assisting customers with putting air in tires. After 2 or 3 months the apprentice begins to help the master mechanic as an assistant to hand over tools, find spare parts, and clean engine parts. This process goes on for about 6 months, after which more complicated tasks are delegated to the apprentice under the supervision of the master mechanic. Once the master mechanic is assured of the apprentice's degree of competence and confidence, full responsibility is given to the apprentice to do engine repair work, also under close supervision from the master mechanic.

Continuous on-the-job assessment takes place by the master mechanic. After two years, the apprentice is graduated through a ceremony and is given the full title of mechanic. The newly graduated mechanic then has a choice of setting up on his own or remaining with the master mechanic. Given the cost of setting up new car repair workshops, the tendency is to stay with the master until sufficient saving has been made by the graduate to start up a new workshop. It may take up to 8 years before an apprentice has the skills and the means for setting up a new workshop. In vehicle mechanics, there is a tendency to specialize in one of the different fields, such as body repair and painting, engine mechanics, or electrics and electronics.

Age range of the apprentices is between 14 and 20 years of age for large vehicles and 9 to 20

for smaller passenger vehicles. The main reason for the difference in the starting age is the requirement for physically stronger personnel in repairing large vehicles.

School is attended either before starting work or after finishing work. Those who attend school do it with the purpose of gaining literacy as a general skill and as a skill needed to do their work more effectively by being able to do and follow drawings and read specifications.

There is friendly competition among apprentices with different levels of skill. There is also collaboration between workshops that operate in close proximity to each other. Some master mechanics reward innovativeness by giving lump sum payments of appreciation to the apprentices. There were no reports of maltreatment or physical abuse by the master mechanics. However, given the relatively high cost of parts and the type of damage that could be done by bad workmanship, the master mechanic reserves the right to deduct the cost of the damage from the apprentice's wages.

There is a general sentiment in favor of setting up formal training centers, accessible to the apprentices and master mechanics. Some of the master mechanics feel that they must have, and know how to work with, new technology if they are to remain competent in their jobs.

6.2.3 Metal Working Apprenticeship (Charikar)

Apprenticeship in metalworking commences with the apprentice being introduced to the master metal worker by an older (male) family member. The introduction also represents a form of recommendation and guarantee by the older family member for the new apprentice. Typically, the family of the apprentice is known to the master.

The learning process starts with the apprentice being made responsible for keeping the workshop in order by sweeping at the end of the day, perhaps fetching or cooking lunch, and cleaning and putting the tools away at the end of the working day. This part of the process takes around two months. The next stage lasts a month and involves learning to cut

metal rods or sheets and learning to use the tools for cutting. If the apprentice is still committed and showing interest to learn more, for the next one to three years he is taught how to cut, bend, weld, and assemble pieces of metal as partial- or fully-complete products. The wage paid to an apprentice ranges from 500 Afghani to 2,500 Afghani per week, depending on merit (and, presumably, age).

The age range of the group of apprentices engaged in the focus group discussion in Charikar was between 12 and 20. The reasons for becoming an apprentice were stated as interest in the trade, a felt need to learn an income generating trade, or both. The majority of the apprentices, an estimated 80 percent, are either illiterate or have low literacy levels although an estimated 90 percent of metal working apprentices go to normal schools.[27] The purpose of going to school is to gain literacy for general purposes and to increase the ability to learn so that they can measure and calculate.

None of the apprentices engaged in this study goes to vocational training schools. The apprentices attending school work around 5 hours per day while those who do not attend school work an average of 9 hours per day. Some go to school before starting work while others attend school after work.

Normally, a metalworking apprentice "graduates" after two or three years, but sometimes longer, depending on ability to learn and the approval of the master trader. A common test for apprentices to qualify as masters is the ability to take orders from customers, price them correctly, execute them, and meet the specifications provided by the customer. This test happens every 3 or 4 months, after the apprentice has learned the basics of metalworking. While the test is being conducted, the master trader observes closely and notes areas in which the apprentice needs more training. An apprentice usually graduates when he is able to perform fully and without assistance from the master trader. It is after this point in the process

[27] Focus group discusstion with ironmongering apprentices in Charikar (Parwan) on May 1, 2013. It has to be noted that going to school and even being at relatively high school grades does not necessarily result in full literacy due mainly to the poor quality of basic education in the public school system.

that the discussion begins between the apprentice and the master on how the apprentice could set up his own workshop, often the qualifying proof of being a master trader.

There is friendly competition among apprentices working for the same master or different masters. The competition is based on speed, accuracy, and innovative designs. Winning these competitions often results in qualifying to a master trader after a shorter than average period of time. Older and more experienced apprentices often act as mentors and become designated master traders when the master trader is not present.

Discipline at work is imposed verbally by the master trader, but could also take the form of suspension of the apprentice, and sometimes even corporal punishment. Parents of the apprentices are said to be aware of corporal punishment as a disciplinary measure for their children during apprenticeship but view it as part of the learning process, growing up, and becoming a responsible adult.

The focus group participants were asked for recommendations to improve their learning environment and conditions. There was strong emphasis on receiving quality education, in the public system or at vocational centers, since even those who go to school do not learn adequately due to the poor quality of the education they receive. There was also concern about safety at work and adequate protection from the adverse impacts of metalworking such as burns, eye damage, or losing limbs. More generally, apprentices and master traders expressed dissatisfaction with poor infrastructure, including energy outages and lack of access to sanitary facilities such as safe drinking water and adequate toilets at work.

6.2.4 Carpentry Apprenticeship (Charikar)

Apprenticeship commences with the apprentice being introduced to the master carpenter by an older (male) family member. The introduction also represents a form of recommendation and guarantee by the older family member for the new apprentice. Typically, the family of the apprentice is known to the master as a relative, member of the same ethnic group, or neighbor.

Previous knowledge on the background of the apprentice and also knowing senior members of his family serve as means to resolve any conflicts that may arise during the apprenticeship between the master trader and the apprentice.

The new apprentice begins with general cleaning and tidying up duties around the workshop. The learning process begins with familiarizing the new apprentice with the various tools of the trade and simple tasks such as using a handheld saw for cutting pieces of wood, followed by basic assembling using wood glue, wooden pegs, or nails and shaving and sanding of assembled pieces. This process take approximately 2 months. For the next 5 to 6 months, the apprentice is shown how to design wooden products using paper and pen. The next 2 to 3 months is spent in learning how to install knobs, handles, and locks on wooden products. The final stage is designing and making wooden doors and windows. The remainder of the time is spent gaining experience and efficiency in fulfilling these tasks. The full length of apprenticeship in carpentry is between 1.5 and 2 years.

During the first year of apprenticeship the weekly wage is between 200 and 600 Afghanis. After the first year, and providing the apprentice has learned the trade, the status changes from apprentice (shagerd) to worker (kargar) and the weekly wage is raised to between 1,500 and 2,000 Afghanis.

The age range for apprentices is between 10 and 18. The reasons for becoming a carpentry apprentice are following the family trade, interest in woodworking, easiness of carpentry compared to other trades, and finding a skill to earn income. Around 60 percent of carpentry apprentices go to public schools. The reasons for attending school are learning literacy and basic mathematics as means to assist them in learning their trade. The apprentices attending school work up to 5 hours per day while those who do not attend school work around 8 hours per day. The preference of many master carpenters is to have apprentices who do not go to school since going to school reduces the availability of the apprentices for work.

Graduation is based on the continuous assessment of the apprentice's work by the master carpenter. The assessment takes place in stages, becoming more rigorous as the tasks delegated to the apprentice become more and more sophisticated. Apprentices with proven ability in fulfilling certain tasks, such as window frame making, are given full responsibility for those tasks in the workshop. Rotation between tasks ensures that the apprentice gains experience in all the tasks in the workshop and is used as part of the assessment process. The apprentice is fully qualified when he can design on paper, build wooden furniture, take full orders from customers, price orders, deliver orders, and generate a profit for the business.

Conflicts in the workplace are resolved with the master carpenter having the final say. There is a tradition of apprentices working with master carpenters other than their own. This practice appears to be driven more from labor sharing than expanding the apprentice’s work experience, though the outcome is the same. By working in different workshops, the apprentices are exposed to new ways of doing things and learn more. Friendly competition among the apprentices is common in the carpentry trade.

The needs identified by those interviewed were access to sufficient and adequate tools and technical training for the master carpenters and apprentices.

6.2.5 Refrigerator Repair Apprenticeship (Mazar-e Sharif)

Apprentices are introduced to the master mechanic by a parent, a senior relative, or through close friends of the family. The introducer also acts as guarantor for the apprentice. Previous knowledge on the background of the apprentice and also knowing senior members of his family serve as means to resolve any conflicts that may arise during the apprenticeship between the master mechanic and the apprentice.

The types of repair in this trade include refrigerators, air conditioning systems, washing machines, and vacuum cleaners. The new apprentice begins with general cleaning and tidying

up duties around the workshop. After about 2 months, the learning process begins with familiarizing the new apprentice with simple mechanical repairs and over time moves to more complicated ones. Hands-on training commences with the master mechanic delegating larger jobs or complete jobs to the apprentice based on his assessment of the apprentice's abilities. The main task is replacing parts of the machinery and a small amount of electrical work. Since there is no manufacturing or designing involved in repairing appliances, the qualification period is relatively shorter, allowing for the apprentice to graduate after about one year.

During the first few months of apprenticeship the weekly wage is between 150 and 500 Afghanis. Toward the end of the year, the weekly wage could be as high as 2,000 Afghanis per week depending on the experience, age, and ability of the apprentice.

The age range for apprentices is between 10 and 20 years of age. The reasons for becoming an apprentice are learning a marketable trade and increasing one's ability to find employment. The overwhelming majority of the apprentices go to public schools, mainly to gain literacy. Time allowances are made for apprentices who want to continue attending public school.

Graduation is based on the continuous assessment of the apprentices' work by the master mechanic. As with other trades, the assessment takes place in stages, becoming more rigorous as the tasks delegated to the apprentice become more and more sophisticated. Apprentices with proven ability in fulfilling various tasks are delegated more and more responsibility. The apprentice is fully qualified when he can repair all types of electrical home appliances, take repair orders from customers, diagnose the problem accurately, fix the problem efficiently, and generate a profit for the business. Once the master mechanic approves of an apprentice as a fully trained mechanic, there is a celebration with personnel from neighboring workshops and members of the family of the apprentice.

Conflicts in the workplace are resolved with the master mechanic having the final say. There is not a tradition of apprentices working with master mechanics other than their own.

Friendly competition among the apprentices is common and is measured through the ability to diagnose problems and the speed with which the problem is resolved.

6.2.6 TV Repair Apprenticeship (Mazar-e Sharif)

Apprenticeship in TV repair commences with the apprentice being introduced to the master repairer by a family member or someone known to the master repairer. The introduction is a form of recommendation and guarantee for the new apprentice. The master repairers sometimes test the new apprentices to establish what level of wage to give them and to identify their training needs during apprenticeship.

The learning process begins with the apprentice being given general cleaning and tidying tasks in the work area, sorting parts, and storing TVs, radios, and other electrical equipment such as electric fans. This period is relatively short and lasts for about two weeks. There is then formal training by the master repairer on different parts of TV and radio and basic electrical knowledge. Combined with carrying out relatively simple repair tasks, this formal training can take up to 6 months. Progressively, and after the master repairer has established the apprentice's competences, more complicated repair tasks are delegated to the apprentice under the supervision of the master repairer.

The age range of the apprentices is between 12 and 18. Reasons for becoming a TV repairer are interest in the work and the need to have a marketable skill. School is attended usually before starting work but also sometimes after finishing work. There is no relation between going to school and the apprenticeship other than the fact that literacy and understanding basic mathematics helps learning during apprenticeship.

It takes between 2 and 4 years before the apprentice can graduate to a fully qualified repairer. By the time the apprentice is fully trained he has a reliable understanding of electrical aspects of appliances and electronic circuits. When the apprenticeship process is completed, the apprentice then has a formal meeting with the master repairer and asks for a higher salary as a

qualified repairer. This demand is sometimes met by the master repairer. If he cannot afford the new wage but approves of the apprentice's skills, he may offer to help with setting up a new workshop for the apprentice.

Apprentices in the same workshop and also apprentices from different workshops are encouraged to compete with one another by the master repairers for learning purposes and also as part of the ongoing testing to graduate. As with other trades, if an apprentice makes a mistake and spoils materials or damages equipment resulting in a loss to the business, the master trader deducts the cost from the apprentice's wages.

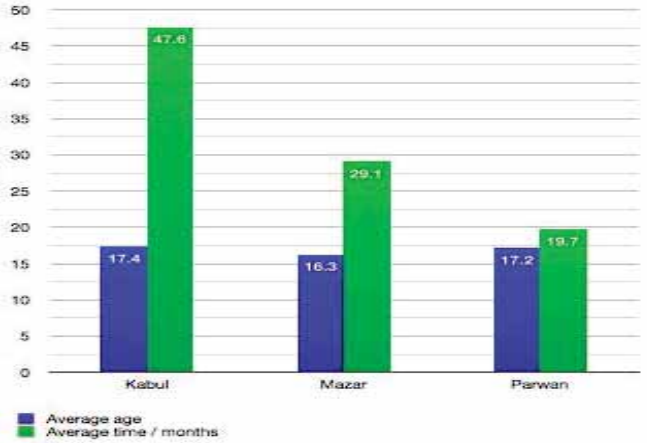
There is a general sentiment in favor of setting up formal training centers accessible to the apprentices and master traders. Some of the master repairers feel that they must have and know how to operate new tools and machinery if their skills are to remain marketable.

6.2.7 Summary: Key Features of Traditional Forms of Apprenticeship

The learning process for the apprentice is similar in all trades. Apprenticeship begins with carrying out menial jobs in the workplace including cleaning and tidying up and sometimes making food. This is the first test to establish the apprentice's commitment to learning and acquiring skills. After an initial period of no longer than two months, the apprentice becomes increasingly involved in various, more technical, work tasks. In all trades studied in this research, the maximum time required to learn everything is about two years. However, many apprentices remain in their position for much longer than two years (Figure 14).

Average Age of Apprentices	Average age	Average time in months
Kabul	17.4	47.6
Mazar	16.3	29.1
Parwan	17.2	19.7

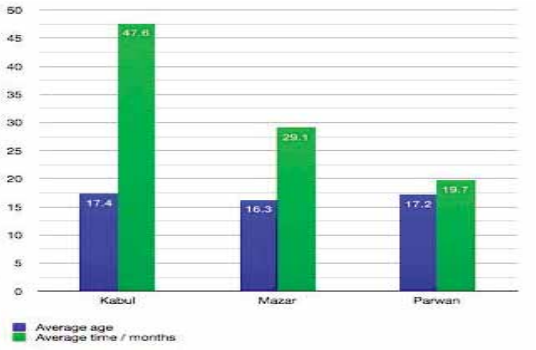
Figure 14. Average Age and Apprenticeship Length by Location



There is a twofold explanation for remaining as an apprentice over long periods of time. Many experienced and qualified apprentices have no desire to set up on their own and are happy to be paid as skilled workers by their master traders. Other qualified apprentices who might be interested in setting up on their own may fear the many challenges they would have to face, including competition and access to start-up capital.

There are variations in the length of time spent as an apprentice among Kabul, Mazar-e Sharif, and Charikar. Apprentices spend the longest time as an apprentice in Kabul and the shortest time in Charikar (Figure 15).

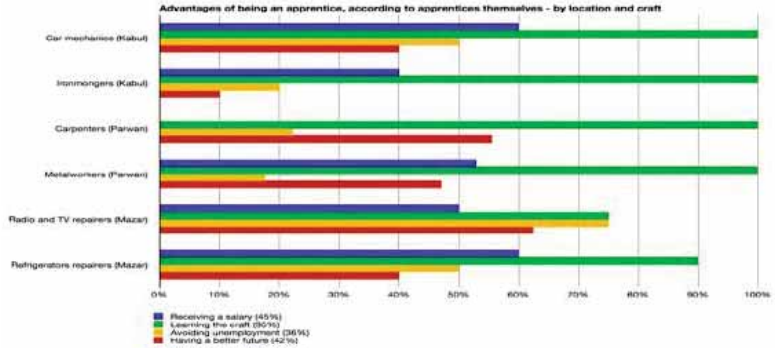
Figure 15. Average Age and Length of Apprenticeship by Location



One possible explanation for this difference may be the high rents and other expenses in Kabul as compared to Charikar and Mazar-e Sharif, prohibiting qualified apprentices from setting up their own businesses. The weekly wage ranges from 200-500 Afghanis per week for a new apprentice to around 2,000 per week for more experienced apprentices. The working conditions are generally poor with inadequate or no access to sanitary services or running water.

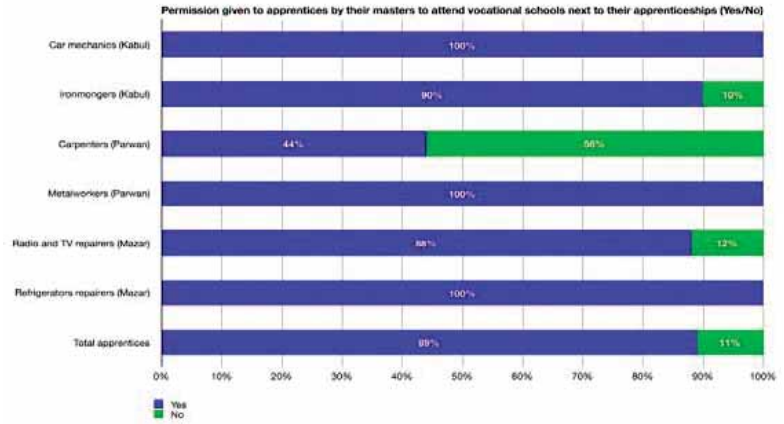
The main motivation for becoming an apprentice is to earn a livelihood by learning a marketable trade (Figure 16). There are also a number of apprentices who choose one trade over another out of interest or because they follow the family trade.

Figure 16. Reasons for Becoming an Apprentice – By Location



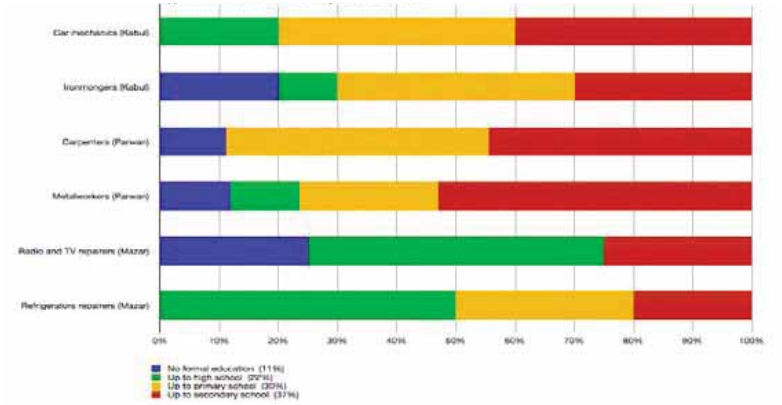
The vast majority of the apprentices go to school. None of the apprentices from this study attended vocational schools. By and large the master traders allow their apprentices to attend school. The variations in approval by the master traders for the apprentices to attend school are shown in Figure 17. A notable exception to this broad approval is the carpentry trade in Charikar (Parwan).

Figure 17. Approval for Apprentices to Attend School



Eleven percent of those surveyed are formally illiterate, that is, they have had no form of education and cannot read or write. Over a third of the apprentices have secondary school education, less than one third have primary school education, and 22 percent have high school education (Figure 18). As stated earlier, however, attending school does not always constitute functional literacy due to the poor quality of education provided through the public school system.

Figure 18. Level of Education of Apprentices by Location

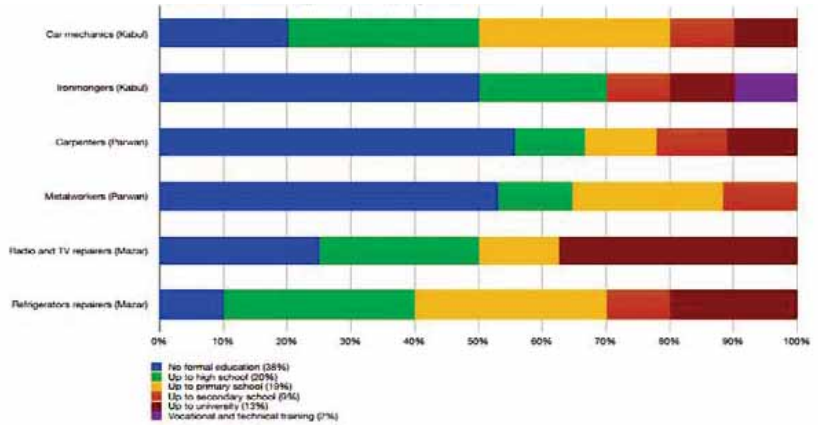


It is worth noting that a literacy rate of 89 percent among the apprentices surveyed is astoundingly high and not at all reflective of the national situation. To illustrate, the National Risk and Vulnerability Assessment (NRVA 2007/8) estimates the national adult literacy rate for men aged 15 and above at 39 percent.[28]

Such high percentage of formal, but not necessarily functional, literacy contrasts strongly with the apprentices' fathers' levels of education. Thirty eight percent of the fathers have no education, contrasted with 11 percent of the sons while high school level education is comparable between the two generations with 22 percent for the sons and 20 percent for the fathers (Figure 19).

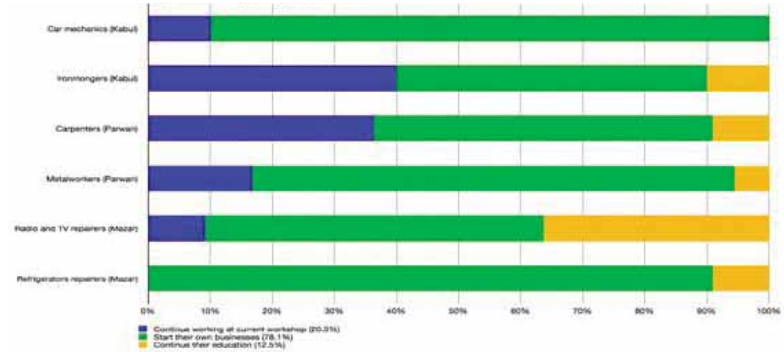
[28] For women the rate is much lower at 12 percent. In rural areas where an estimated 74 percent of the population resides the situation is more acute, with an estimated 93 percent of women and 65 percent of men lacking basic reading and writing skills.

Figure 19. Education Level of Fathers by Craft and Location



The vast majority of the apprentices would like to eventually start their own businesses. The apprentices' desire to set up their own business appears to be a function of the type of trade and location. For example, 90 percent of the car mechanics in Kabul would like to set up their own workshops, presumably because of the size of the market whereas less than 60 percent of the TV and radio repair apprentices expressed a desire for running their own businesses. Just over 20 percent of all the apprentices surveyed had no desire to set up their own businesses (Figure 20).

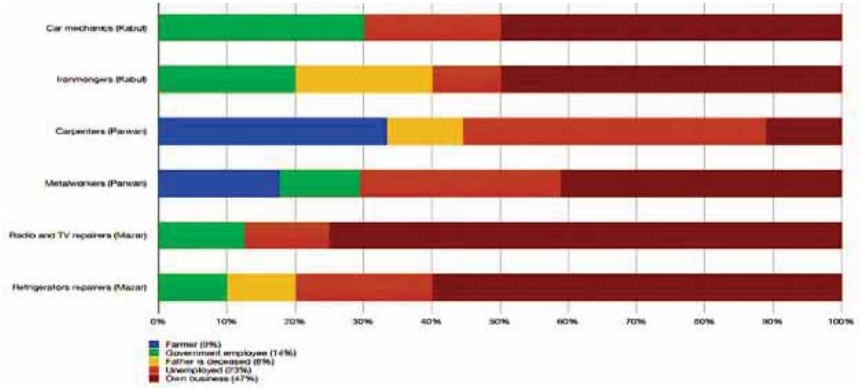
Figure 20. Apprentices' Future Plans by Trade and Location



Contrasting the future career intentions of the apprentices with their fathers reveals important

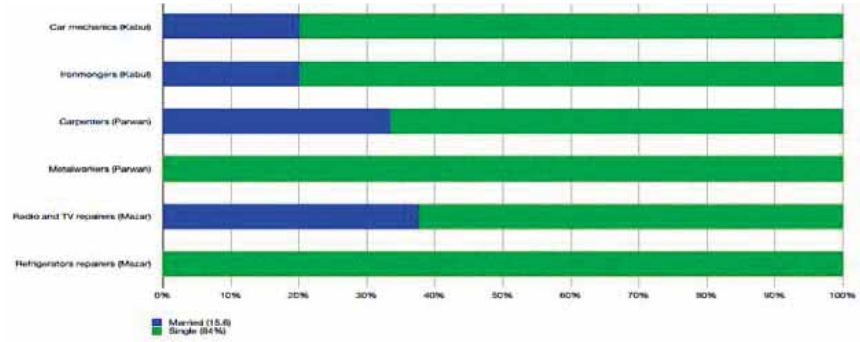
insights on how craft traditions persist. The actual jobs of the fathers are shown in Figure 20. Almost half of all the fathers (47 percent) own their own businesses in the trade for which they were trained, 14 percent have become government employees, and 23 percent are unemployed. Of note is the significant percentage of the fathers who are farmers in Charikar, which is not surprising given the fact that Parwan province is much more rural than Kabul and Mazar-e Sharif. There are no farmers among the fathers in Mazar-e Sharif or Kabul (Figure 21).

Figure 21. Fathers' Employment by Craft and Location



Eighty four percent of the apprentices in the three locations are single – not surprising given the low average age of the apprentices (Figure 22).

Figure 22. Marital Status of Apprentices by Craft and Location

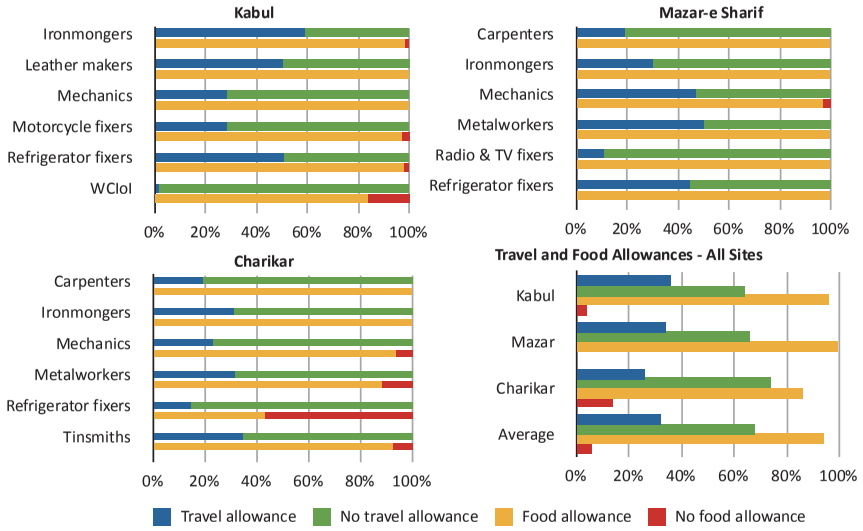


6.2.8 Apprenticeship Conditions – All Trades

Almost all apprentices are paid wages. The only exception is the women's crafts industry of Istalif where only half of the apprentices get paid. In addition to a weekly wage, apprentices receive other benefits such as assistance with transportation costs, food at work, and accommodation. Food allowance is common in all apprenticeship arrangements covering breakfast and lunch. Travel allowance is more common in the bigger population centers such as Kabul and Mazar e Sharif but not a common practice overall (Figure 23).

Travel and Food Allowances	Kabul	Mazar	Charikar	Average
Travel allowance	36%	34%	26%	32%
No travel allowance	64%	66%	74%	68%
Food allowance	96%	100%	86%	94%
No food allowance	4%	0%	14%	6%

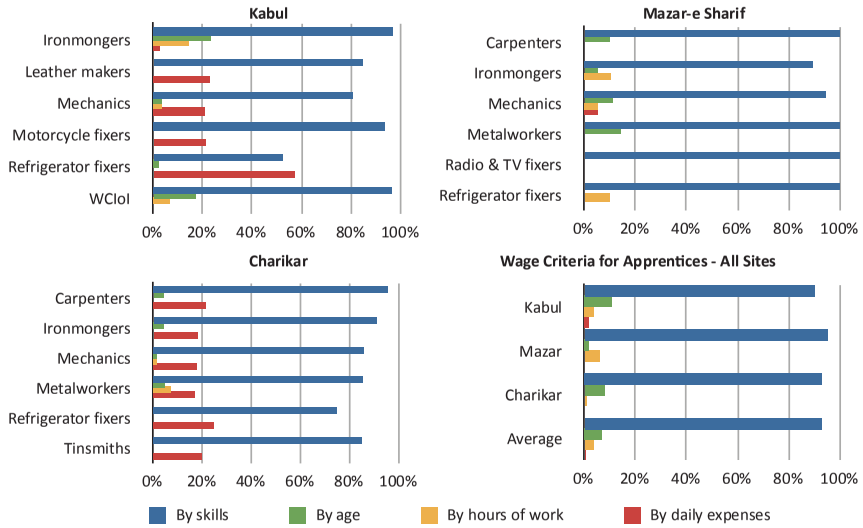
Figure 23. Travel and Food Allowances



The wage depends largely on work experience, as the apprentices gain more experience and become better in their trade, they are likely to have increases in their wages (Figure 24).

Wage criteria for Apprentices	Kabul	Mazar	Charikar	Average
By work experience	90%	95%	93%	92.7%
By daily needs	11%	2%	8%	7%
By age	4%	6%	1%	3.7%
By hours of work	2%	0%	0%	0.7%

Figure 24. Wage Criteria for Apprentices



There is some variation in the working hours between different senfs and different locations (Table 3). Of note here is the low level of wages for WCIoI (Kabul) and refrigerator repairers (Charikar). In all other cases apprentices are paid on average between 2,000 to 3,000 Afghanis per month. In addition, all apprentices get at least one meal a day and most have allowances for transportation.

Table 3. Wage and Working Hours

Location	Senf	Average Salary (Afs Per Month)	Average Work Hours (Per Day)
Kabul	Ironmongers	4,766	7.6
	Leather makers	3,033	7.5
	Mechanics	3,130	7.9
	Motorcycle Repairers	2,113	7.7
	Refrigerator Repairers	3,496	8.4
	WCIoI	756	6.3
Mazar-e Sharif	Carpenters	3,231	8.5
	Ironmongers	3,677	7.2
	Mechanics	2,129	6.8
	Metalworkers	2,225	8.3
	Radio & TV Repairers	1,911	6.2
	Refrigerator Repairers	2,022	7.6
Charikar	Carpenters	3,371	8.9
	Ironmongers	2,904	7.5
	Mechanics	1,601	8.2
	Metalworkers	1,685	8.5
	Refrigerator Repairers	733	5.4
	Tinsmiths	1,471	6.7

The highest wages paid to apprentices are in Kabul, followed by Mazar-e Sharif and Charikar. There also seems to be a positive correlation between the average hours of work and wage level (Figure 25).

Wage and Working Hours	Kabul	Mazar	Charikar	Average
Wage/Months by USD	58	51	39	49
Working hours/day	7.6	7.4	7.5	7.5

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Figure 25. Average Daily Working Hours and Average Wage per Month

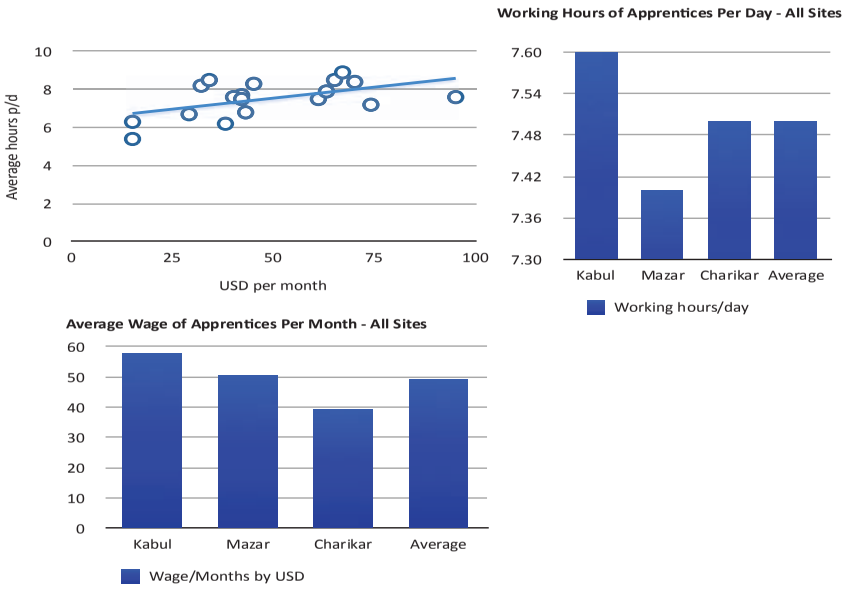
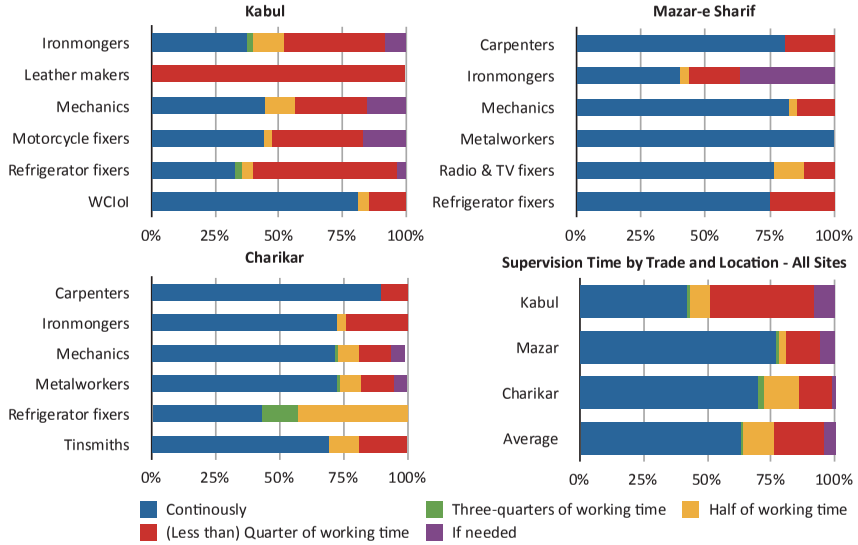


Figure 26 shows supervision time as reported by the apprentices. The most remarkable finding here is that leather making apprentices reportedly receive very little supervision while all others receive a significant degree of supervision.

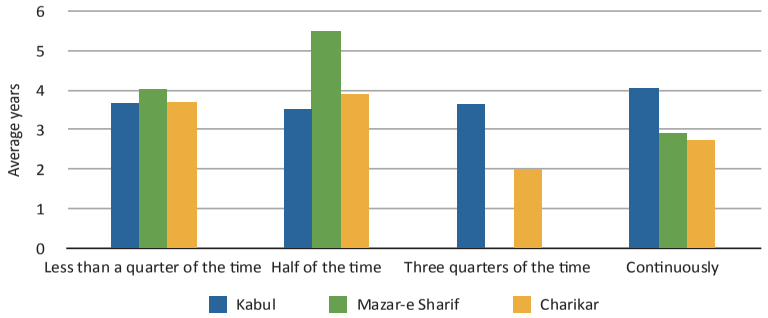
Supervision Time-by Trade and Location	Kabul	Mazar	Charikar	Average
Continuously	42%	77%	70%	63%
Three quarters of working time	1%	1%	2%	1%
Half of working time	8%	3%	14%	12%
(Less than) Quarter of working time	41%	13%	13%	20%
If needed	8%	6%	2%	5%

Figure 26. Supervision Time – By Trade and Location



In Mazar-e Sharif and Charikar the vast majority of the apprentices reported having continuous interaction with their master craftsmen. In Kabul the supervision of the apprentices by the masters is considerably lower than the other two places (Figure 27).

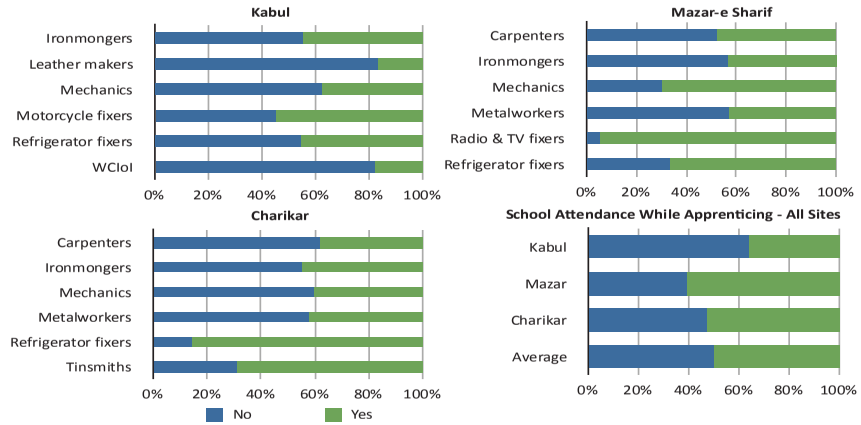
Figure 27. Supervision Time – All Trades by Location



There is also variation in the length of time spent as an apprentice between the different senfs and locations. The ironmonger apprentices tend to spend a longer period of time in their apprenticeship arrangements than other crafts. This is most likely due to complexity of iron mongering compared to other trades.

School attendance while Apprenticing	Kabul	Mazar	Charikar	Average
No	64%	39%	47%	50%
Yes	36%	61%	53%	50%

Figure 28. School Attendance While Apprenticing



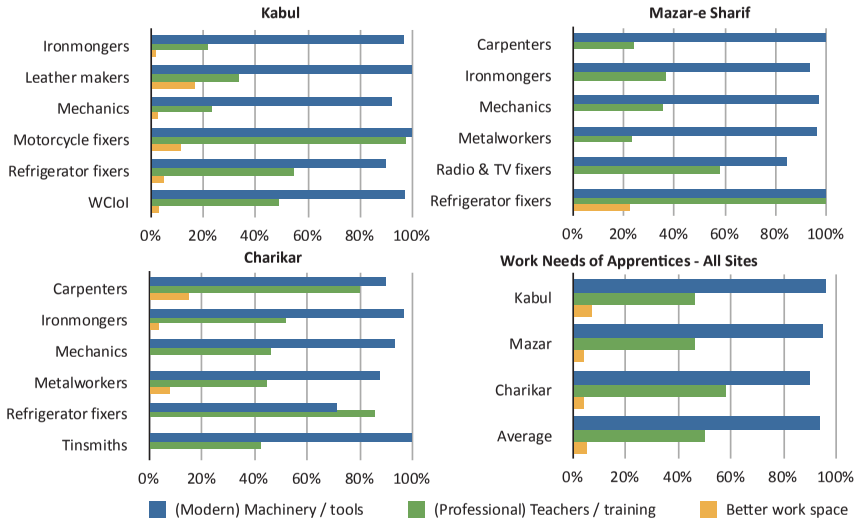
About half of the apprentices go to school while doing apprenticeships. There are no significant differences in school attendance between Kabul and the two provincial centers (Figure 28). Some of the master craftsmen complained about apprentices going to school and thus lacking sufficient motivation for learning the trade.

The resources needed to learn better according to both the apprentices (Figure 28) and craftsmen (Figure 29) are primarily better tools and machinery. Significantly, there is a shared sentiment among the masters that the masters themselves need more professional training and teaching skills so that they can better pass their skills onto the apprentices. The needs identified by masters are many and of the most basic nature. The need that ranked the highest was

modern tools and machinery, followed by upgraded skills (Figure 29).

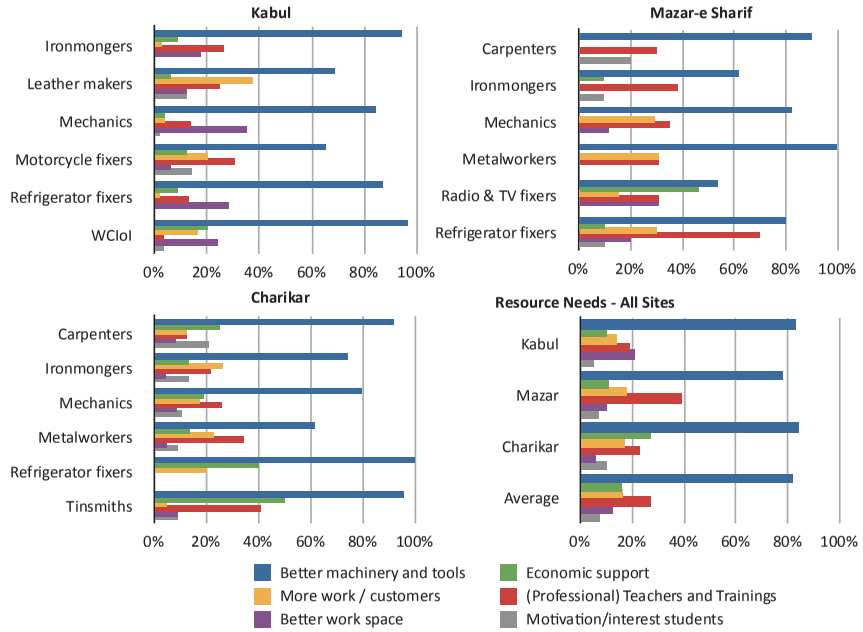
Work Needs-Apprentices	Kabul	Mazar	Charikar	Average
(Modern) Machinery/Tools	96%	95%	90%	93.7%
(Professional) Teachers/training	46%	46%	58%	50%
Better work space	7%	4%	4%	5%

Figure 29. Work Needs - Apprentices



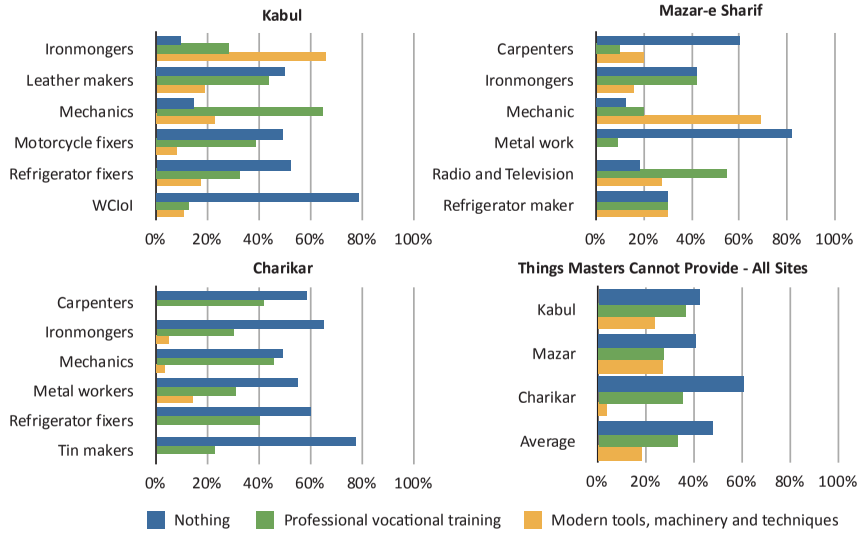
Resource Needs-Master Craftsmen	Kabul	Mazar	Charikar	Average
Better machinery tools	83%	78%	84%	81.7%
Economic support	10%	11%	27%	16%
More work/customers	14%	18%	17%	16.3%
(Professional) Teachers and Trainings	19%	39%	23%	27%
Better work space	21%	10%	6%	12.3%
Motivation/interest students	5%	7%	10%	7.3%

Figure 30. Resource Needs – Master Craftsmen



What masters cannot provide	Kabul	Mazar	Charikar	Average
Nothing	42%	41%	61%	48%
Professional vocational training	37%	28%	35%	33%
Modern tools, machinery and techniques	24%	27%	4%	18%

Figure 31. What Masters Cannot Provide



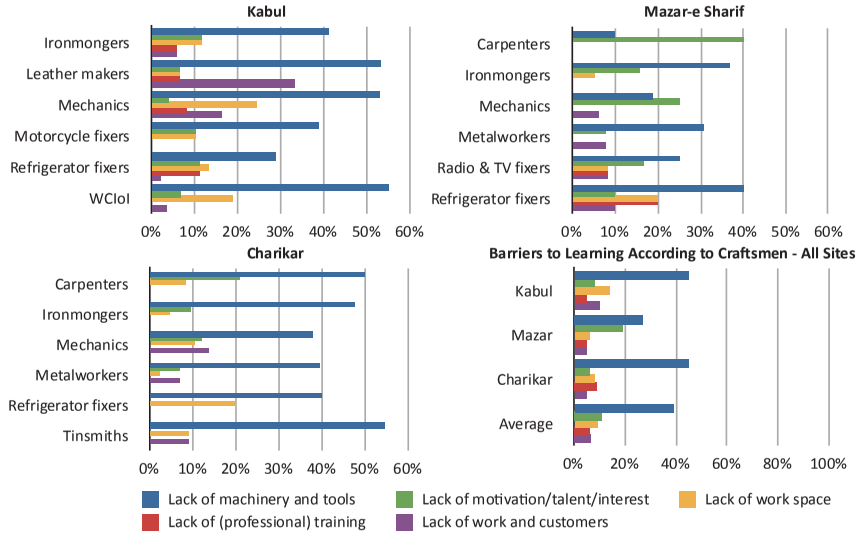
Most master traders said they could teach everything in their craft. However, a significant number of masters indicated that additional professional vocational training was needed for their students to learn the craft accompanied, in some cases, with literacy and basic mathematics training. Some of the masters admitted that they themselves would not pass technical tests particularly on modern technology, automobile electronics, and some modern machinery. A negligible number of masters had received training themselves recently (Figure 31).

It is also clear that the rules that govern traditional apprenticeship are almost entirely tacit and in many cases arbitrary. The master could be very helpful and attentive or not at all, the length of the apprenticeship could be two years or much longer, there are no formal stages in the apprenticeship, and progress of the apprentice is measured and recognized only by the master and based on his subjective judgment of the apprentice's abilities and skill level. Last but not least, finishing an apprenticeship does not come with a certificate or other forms of formal

documentation in recognition of becoming a master and having finished an apprenticeship successfully.

Barriers to Learning According to Craftsmen	Kabul	Mazar	Charikar	Average
Lack of machinery and tools	45%	27%	45%	39%
Lack of motivation/talent/interest	8%	19%	6%	11%
Lack of work space	14%	6%	8%	9.3%
Lack of (professional) training	5%	5%	9%	6.3%
Lack of work and customers	10%	5%	5%	6.7%

Figure 32. Barriers to Learning According to Master Craftsmen



When asked about what hinders apprentices from learning, the master traders listed insufficient and out-of-date machinery and equipment, lack of motivation, and lack of professional training. Professional training seemed to be more of an issue with the more technical trades such as radio and television repair but also with iron mongering and leather making in Kabul (Figure 32). This may be attributable to the demand in the Kabul market for more complicated designs.

At the conclusion of the interviews and focus group discussions the participants were asked to identify ways in which the traditional apprenticeship system could be enhanced to meet market demand for a skilled labor force. The findings from these interviews may be summarized as follows:

1. There is a need for modern production technology and tools in all trades.
2. There is a need for professional teachers to train the masters on modern production techniques and using modern production tools.
3. Literacy and basic mathematics training needs to be provided for apprentices, a significant number of whom are functionally illiterate and thus limited in their ability to absorb formal learning.
4. English literacy is also necessary for some of the more senior trades people, such as trade masters or those who work in more complex trades such as auto mechanics.
5. Master traders need tailor-made training to standardize their knowledge of their trades and to enable them to transfer their skills to their apprentices more effectively.
6. Most of the basic equipment shortages could be addressed if there is access to affordable finance.[29]
7. International organizations should not just provide raw materials and equipment. Without skilled personnel to use the raw materials appropriately and economically, a significant amount of it goes to waste.
8. Apprentices are very badly paid and this acts as a disincentive for motivated new apprentices to join different trades. At minimum, the wages paid to apprentices should be equal to what an unskilled laborer earns in the open market.[30]
9. The markets for the various goods and services being provided by the traditional forms of enterprise need to be better understood and expanded.
10. Thought should be given to protecting the domestic market for domestic goods as cheap imports are likely to undermine traditional forms of industrial organization.
11. Deficiencies in basic infrastructure such as unreliable or unavailable electricity are major

[29] Microfinance from Microfinance Institutions is not advisable in this case due to the short period of repayment and exorbitantly high interests charged. See APPRO (2008) on some of the issues related to microfinance in Afghanistan.

[30] In Kabul, for example, unskilled casual laborers earn at between 150 and 200 Afghanis per day, equalling a weekly wage of 900 to 1,200 Afghanis, compared to between about 500 Afghanis per week for a new apprentice.

obstacles for all forms of production requiring electricity.

12. Working conditions in the vast majority of MSSEs are very poor with a general lack of running water and sanitary facilities at the workplace.

7. Key Findings

MSSEs' Business Needs: This research and other research on MSSEs in Herat illustrate clearly that MSSEs have a number of major challenges that bear on the apprenticeship system. None of the businesses contacted for this and other research has a business plan or a marketing strategy or direction. None of the traditional businesses active only in the domestic market have formalized or certified quality control systems. In addition, the vast majority of MSSEs in Afghanistan do not have systems of bookkeeping. This degree of informality is likely to have an adverse effect on the training of the apprentices ranging from perpetuating inefficient business practices to not being transparent or fair to the apprentices.

Ages of Apprentices: There is a wide range of ages among the apprentices from 7 to 8 to, in a few cases, over 40 or 50. There is some regional variation in the age range of the apprentices with Charikar tending to have some apprentices of a very young age while the Women's Crafts Industry of Istalif provides apprenticeships for older women.

Length of Apprenticeship: With some exceptions, the average number of years spent in apprenticeships is between two and six years. There are no significant variations between regions. The masters reported that they worked comparable numbers of years as apprentices prior to becoming masters.

Some trades, such as iron mongering and car mechanics, have a longer period of apprenticeship. This is because these trades require more skills than the other trades. Leather makers also spend a long time in apprenticeship as compared to all other apprentices.

Apprenticeship and Kinship: Kinship plays an important role in securing an apprenticeship position in all the senfs and there are no obvious differences between Kabul and the two provincial centers in relation to the role of kinship. The extreme example is provided by the Women's Crafts and Industry of Istalif where up to 80 percent of the apprentices are family members of the masters.

Schooling and Apprenticeship: A small percentage of the apprentices had previous work experience prior to becoming an apprentice while a very high percentage were going to school prior to becoming apprentices. Also, a significant number of the younger apprentices attend school simultaneously. Going to school while apprenticing is looked upon with disdain by some of the masters who believe apprentices should only focus on learning the trade. However, the majority of the master traders approve of apprentices going to school.

Motivations for Apprenticeship: Earning an income appears to be the main motivation for becoming an apprentice. Learning a new skill is viewed by the vast majority of the apprentices as the means to secure a sustainable means of livelihood. There is some variation between the three locations as to the reasons for becoming an apprentice with the two main reasons being earning an income and/or acquiring a skill (to earn an income).

Apprentices have economic benefits for their employers as relatively cheap labour. Some apprentices appear to be trapped in their low paid jobs without the prospect of attaining a master's position. Though historically counterintuitive, the persistence and sustainability of the craft was not stated by the masters as the reason for taking on apprentices.

Entry Requirements: The most common way of entering a trade as an apprentice is through introduction by, and mediation of, a family member. There are no significant differences among the three locations in this regard. There are no formal entry requirements such as a written or practical test. For younger apprentices the parents act as negotiators and

provide the necessary guarantees and assurances to the master.

Pay Conditions and Benefits: Experienced apprentices are paid on average between 2000 and 2500 Afghanis per week. The only exception is the women's crafts industry of Istalif where only half of the apprentices are paid wages. Receiving a food allowance or being provided with food at work is common in all apprenticeship arrangements covering the breakfast and lunch. Travel allowance is more common in the bigger population centers such as Kabul and Mazar-e Sharif.

Working Conditions: Based on the observations made during field visits, it is clear that working conditions for the apprentices and their employers are far from ideal in terms of health and safety. In addition, no mechanisms exist to protect apprentices, particularly young apprentices, at work and there are no mechanisms to resolve conflicts between apprentices and their employers.

Learning Environment: All apprentices receive training in their trade for at least one quarter of their working hours. There is variation among the trades and locations in terms of supervision and learning hours. There appears to be more supervision provided in Kabul and Mazar-e Sharif. This may be a function of operating in larger urban markets where demand for crafted goods is likely to be more sophisticated and thus providing more opportunities for the apprentices to learn faster and more numerous skills to accommodate the demand. A *de facto* outcome of this environment is likely to be shorter apprenticeship periods and a higher number of apprentices becoming masters, providing there is access to resources such as business loans or microfinance.

In Mazar-e Sharif and Charikar the vast majority of the apprentices reported having continuous interaction with their master craftsmen. In Kabul the supervision of the apprentices by the masters seems to be considerably lower than the other two locations. The ironmonger apprentices tend to spend a longer period of time in their apprenticeship arrangements than other crafts. This may be due to the higher degree of complexity in the trade of iron mongering

but also a function of market demand for qualified, trained iron mongers.

About half of the apprentices go to school while doing apprenticeships. There are no significant differences between Kabul and the two provincial centers in terms of school attendance. Some of the master craftsmen complain, however, that going to school undermines the ability of the apprentices to learn on the job.

Learning and Teaching Needs: Better tools, machinery, and knowledge of modern production methods are among the most important needs for both the apprentices and craftsmen. There is a shared sentiment among the masters that the masters themselves need more professional training and teaching skills so that they can better transfer their skills on to the apprentices. The needs identified by masters are many and of the most basic nature.

Most masters claim that they know their craft. However, some of the master traders admitted that they themselves would not pass technical tests particularly on modern technology, automobile electronics, and some modern machinery. A significant number of masters indicated that additional professional vocational training is needed for their students to learn the craft, including literacy and basic mathematics. A negligible number of masters had received training themselves recently.

Insufficient and out of date machinery and equipment, methods, lack of motivation by the apprentices, and lack of professional training of the masters are commonly cited challenges in all the trades. Lack of professional training seems to more of an issue with the more technical trades such as radio and television repair but also with iron mongering and leather making.

Market Conditions: The findings suggest that the market in Kabul is more mature, larger, and more differentiated. The relative sophistication of the demand for the goods produced by Kabul senfs is likely to have a positive impact on the learning environment of the apprentices with the

masters being compelled to teach more of their skills to their apprentices as a means to increase production capacity.

The key findings from this research may be summarized as follows:

- Apprenticeship arrangements not only transfer skills to a younger generation, but are also a source of income for the apprentices and a means for the employers to pay lower wages.
- Apprenticeship learning is loosely and arbitrarily organized though following an ancient and tacit tradition. There are no structured curricula, appraisals, or formal testing mechanisms.
- There is mutual benefit in the traditional apprenticeship system. Apprentices hold a job and more than likely learn a trade while masters can employ unskilled workers as apprentices and pay low wages.
- While there is resilience in the traditional apprenticeship systems, there are a number of major deficiencies including lack of teaching know-how by masters, lack of basic tools and machinery, and lack of knowledge of modern tools and advanced technology. There is an alleged lack of motivation and interest in learning by the apprentices because of being pulled in different directions by family obligations and school attendance.
- Labour market conditions vary in the three locations. However, the generally high level of unemployment in all three locations allows low wages to be paid to all apprentices.

The responses to questions regarding training needs are summarized in Table 32.

Table 4. Summary of Training Needs Per Location / Senf

Location	Senf	Training needs
Kabul	Ironmongers	• Mathematics skills for doing measurements • Literacy • Usage of modern tools and machinery • Certain techniques
	Leather makers	• Usage of modern tools
	Mechanics	• Fixing electronics of a car • Computer training
	Motorcycle fixers	• Fixing advanced motorcycles
	Refrigerator fixers	• Fixing advanced refrigerators
	WCIoI	• Literacy • Advanced tools and machinery
Mazar-e Sharif	Carpenters	• Engraving • Usage of modern tools
	Ironmongers	• Usage of modern tools • Literacy
	Mechanics	• Advanced tools and machinery • Fixing electronics
	Metalworkers	• Working with advanced tools
	Radio & TV fixers	• Advanced tools
	Refrigerator fixers	• Usage of advanced tools • Fixing of advanced refrigerators
Charikar	Carpenters	• Professional training
	Ironmongers	• Professional training • Usage of modern tools
	Mechanics	• Fixing electronics of a car
	Metalworkers	• Usage of modern tools
	Refrigerator fixers	• Professional training (implied in demand for new technology)
	Tinsmiths	• Professional training (implied in demand for new technology)

8. Conclusion and Recommendations

One of the primary concerns and challenges for Afghanistan and its international donors in the post-2014 period is establishing a sustainable economic base as the foundation on which to stabilize Afghanistan and work toward less reliance on donor funding.

This research focused on selected trades with clear physical value-adding features and a reasonable degree of production sophistication as exemplified in carpentry, iron mongering, and repairing electric and mechanical capital goods such as refrigerators and automobiles. This research did not include service occupations such as interpreting and translating for which there is much need for standardization and training. This research also excluded construction trades such as bricklaying mainly because construction trades are not as organized as the trades selected for this research, though arguably as important.

For the vast majority of the senfs the usage of modern tools and technology is a training need while at the same time many senfs have indicated that they do not work with modern tools. It is clear that if TVET were to be aligned to technology transfer / upgrading programming, it would likely have to meet the demand created by the introduction of new technology and tools. Such a strategy would also necessitate a dialogue on financing technology upgrades including, but not limited to, the provision of affordable microfinance.

Much of the literature on TVET argues for a demand-driven approach to the provision of training. The analysis of the data collected for this research shows that small or limited markets are a major concern for MSSEs. Without sufficient knowledge about the domestic market, and thus the demand for the goods and services being produced by the traditional senfs, there is a much smaller incentive for the MSSEs to acquire modern tools and production technology and thus a lower demand for learning outside of the traditional arrangements.

The mix of new and traditional forms of economic organization has created new opportunities and problems. The opportunities include possibilities to make the traditional forms more efficient, effective, and with measurable impact on generating the master craftspersons of the future. The challenges include the unqualified imposition of alien ideas onto the traditional forms of industrial organization. While the role of the private sector will continue to be important in all manner of programming, Afghanistan's nascent private sector needs also to be educated about the importance of sustaining the training of the workforce and the private sector's role in providing the spaces where knowledge transfer could take place to the benefit of the apprentice and the employer. The private sector, including MSSEs must see themselves as the direct beneficiaries of traditional and modern – TVET-based – skills transfer arrangements.

The implicit suggestion by a number of key informants on paying wages to apprentices compatible with the market rate for unskilled labor raises a crucial issue. It is widely recognized that there is insufficient knowledge about the labour market in Afghanistan, including the going daily rate for various types of trade such as auto mechanics, plumbing, carpentry, iron mongering, and so forth. This type of knowledge is widely known among Afghan MSSEs and larger organizations but is mostly absent in the discourse by the international donor organizations with mandates to reform and improve conditions in the labour market.

Traditional production methods are typically "low-tech" in Afghanistan and almost all trades would benefit from machinery and tools upgrading. Introduction of new machinery and tools would necessitate acquiring know-how by the masters who could then transfer their skills to their apprentices. TVET programming should thus devote comparable attention to masters and apprentices as both classes of individuals need skills training and upgrading.

Knowledge of the domestic market for the goods and services of traditional enterprises remains patchy and poor. There is, as a result, a much smaller incentive for the MSSEs to acquire modern tools and production technology and thus a lower demand for learning outside of the

traditional arrangements.

A number of key informants argued that skills training must continue, even without job prospects, if only for increasing human capital in the country. There is a strong sentiment that keeping the youth in schools or in jobs where they learn trades would also help in keeping them away from becoming involved in criminal activities.

Recommendations

- Interventions to increase skills levels in Afghanistan should be aimed at improving the traditional forms of apprenticeship rather than transforming them completely. TVET centers could act as the testing centers for those qualified apprentices who wish to obtain formal recognition for their knowledge of the trade.

- Shorter courses should be designed as part of the TVET system to certify the qualified or mostly qualified apprentices in the traditional system.

- Private sector associations and government and semi-government entities should be more centrally involved in building consensus on the importance of TVET for economic development and growth in Afghanistan. In addition to the Ministry of Education, other entities such as the Ministry of Commerce and Industry (MoCI), Afghanistan Investment Support Agency (AISA), Export Promotion Agency of Afghanistan (EPAA), and Afghanistan Chamber of Commerce and Industry (ACCI) should also be brought on board.

- Traditional production in Afghanistan is low-tech and there is significant concern by the MSSEs about their machinery and tools being outdated. TVET training provision should promote technology transfer to meet this need.

- TVET programming should seek opportunities to sustain technology transfer projects by providing skills training on production equipment maintenance.

- The traditional apprenticeship system and TVET programming are both adversely affected by insufficient knowledge of the market factors. Resources need to be allocated for setting up monitoring mechanisms and generating consistent data on domestic and international markets as the basis on which to plan TVET programming.

- The private sector should be engaged and educated on the virtues of training apprentices. The private sector, including MSSEs, must see themselves as the direct beneficiaries of the traditional and modern – TVET-based – skills transfer arrangements.

- The many senfs and etehadias that organize traditional industry need to be engaged and educated on the importance of TVET in making Afghanistan's workforce competitive.

- The institutional arrangements of the senfs and etehadias should be utilized to influence national policy on training provision and addressing the educational needs of the workforce.

- Recruiting for TVET schools, particularly in more remote areas, should seek ways of working with the families of prospective students, given the important role played by families in the apprentices' job placements.

- Resources need to be allocated for setting up monitoring mechanisms and generating consistent data on domestic and international markets as the basis on which to plan TVET programming.

- Periodic surveys must be conducted to establish demand conditions in the domestic market, and thus the demand for the goods and services being produced by the traditional senfs. The findings generated through such surveys should be used to encourage MSSEs to acquire appropriate and modern tools and production technology and thus a higher demand for

learning outside of the traditional apprenticeship system.[31]

- Functional literacy rates are extraordinarily low in Afghanistan. If numeracy and literacy are prerequisites for joining TVET training to become a carpenter, plumber, or car mechanic, TVET programme delivery needs to be adapted so that lack of numeracy and literacy does not act as an obstacle in the learning process. In recognition of this, thought needs to be given to adopting problem-based learning techniques and use of illustrative problem solving not based on the written text.

[31] Conducting surveys, particualry now (2013), is extremely difficult. However, there are a variety of ways of monitoring market conditions including qualitative surveys.

Part II: Cluster Dynamics

In Afghanistan the bulk of traditional trades are organized in bazaar settings where micro- and small-sized enterprises (MSSEs) are congregated in localized networks or geographically identifiable concentrations of similar, related, or complementary businesses or producers bound together in a social division of labour. These clusters may be v*ertically-integrated* and consist of enterprises linked together through buyer-seller relationships. The clusters may also be *horizontally-integrated* where enterprises share the same market for their products, supply lines for their inputs, and technologies or labour force skills in their production.

Clusters bring together complementarities through vertical and horizontal value chain linkages among the co-located producers. In almost all clusters there are apprenticeship arrangements to train the future generation of craftsman. The main purpose of cluster analysis is to understand the reasons for cluster resilience and entry points for intervention to improve their economic performance and thus contribute to economic growth.

Recognizing this, such entities as the World Bank and UNIDO have dedicated part of their activities to understanding the role of clusters as micro drivers of economic growth and as a means to make a series of inter-related interventions to strengthen the role of clusters in economic development.[32] Clusters are market-driven, underpinned by resilient social networks, and collaborative and competitive. A systemic analysis of clusters entails understanding local specificities by paying attention to the historical, social (cultural and religious), economic, and political environment within which clusters exist. In addition, for cluster analysis and studies to be policy-relevant they need the participation of different constituencies.

[32] See, for example, Roelandt, T.J.A. and P. den Hertog (1998). Cluster Analysis and Cluster Based Policy in OECD Countries: Various Approaches, Early Results and Policy Implications. Draft synthesis report on Phase 1, OECD Focus Group on Industrial Clusters (Paris: OECD).

The value of conducting cluster analysis has long been recognized in development aid programming. Cluster studies not only provide a tool to analyze systems of production at lower scales of analysis, they can also be used as a working method for policy making and as a tool for strategic business development.[33] Cluster analysis should thus identify leadership structures of clusters locally and nationally, strengths and weaknesses, and needs that could be addressed through policy and development programming intervention.

The leadership structures were described in the first part of this report. The remainder of this part of the report focuses on cluster dynamics. The next section describes the objectives, Section 10 provides details on the methods used for data collection and analysis, Section 11 reports on the descriptive findings from the data, Section 12 highlights the key findings, and Section 13 concludes with recommendations.

9. Objectives

This part of the report establishes:

- The extent to which co-located MSSEs view themselves as belonging to a cluster
- The extent to which clustered MSSEs collaborate and compete
- The extent to which clustered entities utilize loans and other financial services from formal and informal sources
- The TVET and non-TVET needs of the clusters

10. Methodology

The above objectives were met through the following activities:

- A physical survey of the clusters in Kabul, Mazar-e Sharif, and Charikar to scope out and establish the geographic locations of the clusters.

[33] See: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTURBANDEVELOPMENT/EXTLED/0,,contentMDK:20274500~menuPK:404396~pagePK:148956~piPK:216618~theSitePK:341139~isCURL:Y,00.html

- Surveys of the selected clusters to establish working and market conditions, competition and collaboration, knowledge spillovers, ownership issues, savings and debts, access to credit, infrastructure issues, and business needs.

Given the various definitions of what constitutes a cluster, this report adopted its own working definition of cluster properties.[34] For this study, an economic cluster is defined as a localized network or geographically identifiable concentration of similar, related, or complementary businesses or producers bound together in a social division of labour. Clusters bring together complementarities through vertical and horizontal value chain linkages among the co located producers. Clustered producers are said to be better prepared to deal with supply-related shocks and changes in consumer preferences. As such, clusters have a tendency to become groupings of interrelated producers that innovate and thus generate structural stability and sustained economic activity. Clusters are varying and dynamic mixtures of cooperative arrangements and competitive relationships.

Key to cluster dynamics is informal, face-to-face, and repeated interactions as the most effective means of information exchange and learning among personnel from different enterprises. Such information could pertain to markets, labour force, material supply conditions, prices, or simply as a mechanism for contract making among the interacting participants.[35] Expansion and growth of the cluster is likely to facilitate moving upward on the value chain. However, moving up the value chain is by no means a given in the evolutionary trajectory of clusters, particularly in a less developed context such as Afghanistan.[36] Increased integration beyond the domestic market bears new pressures on the clustered enterprises and generates a number of governance-related issues, which collectively determine whether and how a local production system persists, declines, or moves up its value chain.

[34] These definitions are drawn from APPRO (2012), *Traditional Economic Clusters and Reconstruction in Afghanistan: The Case of Herat*. Available from www.appro.org.af

[35] For additional details, see Parto (2008). "Innovation and economic activity: An institutional analysis of the role of clusters in industrializing countries". *Journal of economic issues* XLII (4): 1005-1030.

[36] For similar cases to Afghanistan, see Humphrey and Schmitz (2002). "How Insertion in Global Value Chains Affect Upgrading in Industrial Clusters?" *Regional Studies* 36(9): 1017-27.

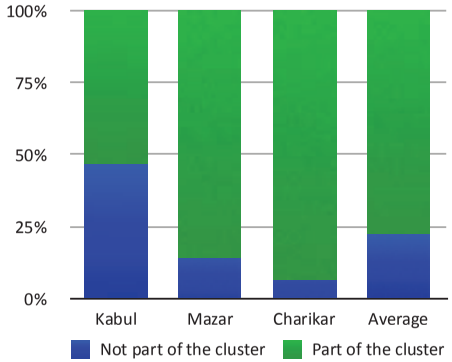
For consistency, it was decided to collect data only on clusters whose members viewed themselves as belonging to a cluster. Asking this control question resulted in keeping the original six clusters in Charikar, excluding refrigerator repairers in Mazar-e Sharif, and excluding the WCIoI cluster in Istalif and refrigerator repairers in Kabul. The findings reported for cluster dynamics are thus based on four clusters in Kabul, five in Mazar-e Sharif, and six in Charikar.

11. Descriptive Data

The surveyed MSSEs were asked if they felt they belonged to a cluster of same trades with similar skill, shared market, and similar challenges and opportunities. The vast majority considered themselves part of a cluster (Figure 33).

Being part of a cluster	Kabul	Mazar	Charikar	Average
Not part of the cluster	46.60%	14%	6.30%	22.30%
Part of the cluster	53.40%	86.10%	93.70%	77.70%

Figure 33. Being Part of a Cluster

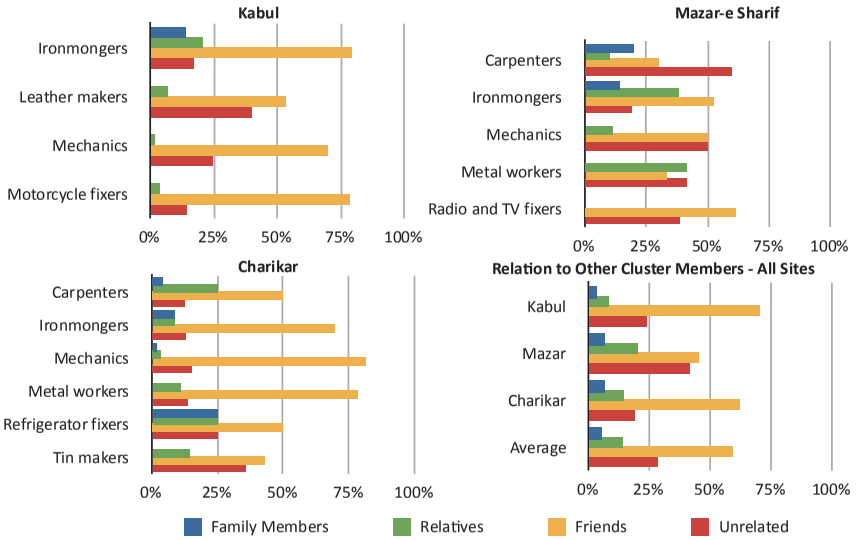


Those MSSEs who saw themselves as belonging to a cluster were asked about the nature of their relationship with other cluster members. There is a wide range of relationships (Figure 34). In Kabul and Charikar friendship, most likely through families, is the most common form of

relationship among the members of same trade. In Mazar e Sharif there is a relatively higher number of MSSEs whose personnel are not related to the personnel of other same-trade enterprises. None of the clusters appears to be predominantly based on a clan-like structure. The incidence of family or kinship ties is higher in older crafts such as iron mongering and carpentry than the other trades. There are also no significant differences between the relationships within clusters in the city and provincial town.

Relation to other cluster members	Kabul	Mazar	Charikar	Average
Family members	3%	7%	7%	6%
Relatives	8%	20%	15%	14%
Friends	70%	46%	62%	59%
Unrelated	24%	42%	19%	28%

Figure 34. Relation to Other Cluster Members



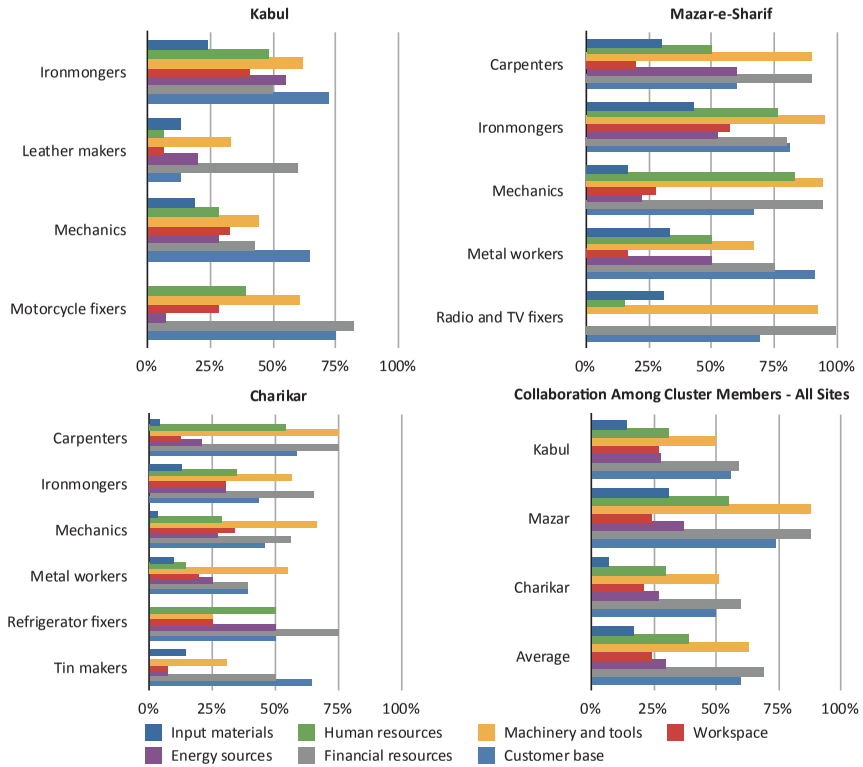
A defining feature of clustered enterprises is the degree of collaboration among the cluster members. In Kabul there are a number of ways in which cluster members collaborate but the type and level of collaboration varies according to the type of trade. The most common form of

collaboration among four of the clusters in Kabul is sharing--borrowing and lending (Figure 35). This level of collaboration on financing is a strong indication of a broader need for access to affordable finance. A similar study carried out in Herat in 2010 indicates that the preference for borrowing from cluster members, as opposed to banks or MFIs, is twofold. Commercial banks appear to have no interest in lending to MSSEs while MFIs charge very high levels of interest and impose short amortization periods for their loans, often not exceeding 12 months. Combined, these constraints make borrowing difficult for MSSEs.

In addition to sharing the customer base, also notable among the Kabul clusters is the high level of collaboration on lending and borrowing tools and machinery, sharing energy sources (e.g., shared generators), relying on human resources of other enterprises for rush orders, bulk purchases of input materials, and even sharing workspace (Figure 35). Almost 50 percent of the ironmongers cluster members share personnel which, most often, is apprentices helping out the other enterprises at busy times. This type of collaboration could serve as a very useful means of promoting formal standards of workmanship through formalized training or certification at TVET training centres.

Collaboration among cluster members in Kabul, Mazar, Charikar	Kabul	Mazar	Charikar	Average
Input materials	14%	31%	7%	17%
Human Resources	31%	55%	30%	39%
Machinery and Tools	50%	88%	51%	63%
Workspace	27%	24%	21%	24%
Energy sources	28%	37%	27%	30%
Financial Resources	59%	88%	60%	69%
Customer base	56%	74%	50%	60%

Figure 35. Collaboration Among Cluster Members in Kabul



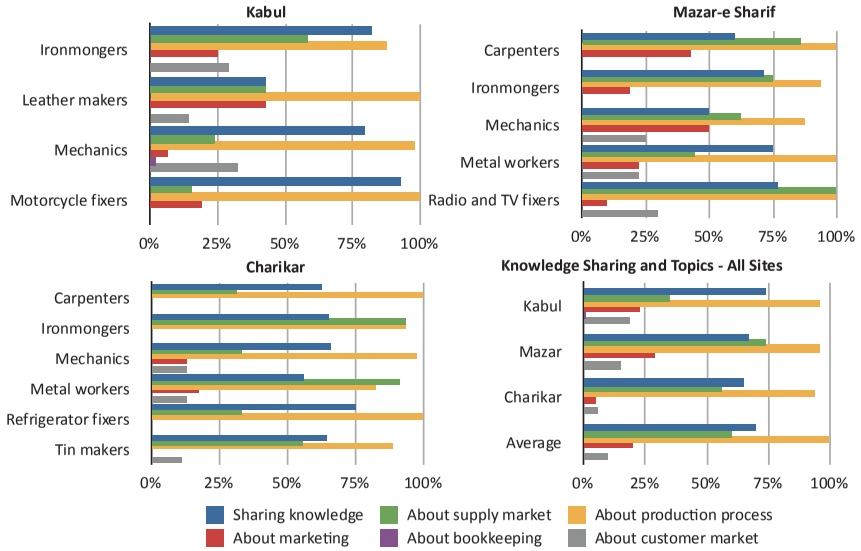
Collaboration among the cluster members in Mazar-e Sharif appears to be much more prevalent as compared to Kabul. The percentage of cluster members engaged in lending and borrowing money is between 75 and 100, which is staggeringly high. Also, there appears to be a very high level of collaboration in terms of sharing tools, apprentices (with the exception of the radio and television repairers cluster), and energy sources, but relatively lower levels of collaboration in sharing input materials sourcing (Figure 35).

In Charikar the intensity of collaboration among cluster members is more similar to Kabul than Mazar-e Sharif. The highest levels of collaboration occur in lending and borrowing tools and machinery, finance, and input materials (Figure 35).

Face-to-face interaction is a defining feature of clustered enterprises. Informal and ongoing communication in a cluster is key to access information about various aspects of running a business based on sharing input materials, machinery and tools, informal loans, human capital, and markets all of which amount to substantial learning through the exchange of tacit knowledge (Figure 36).

Knowledge Sharing and Topics	Kabul	Mazar	Charikar	Average
Sharing knowledge	74%	67%	65%	70%
About supply market	35%	74%	56%	60%
About production process	96%	96%	94%	100%
About marketing	23%	29%	5%	20%
About bookkeeping	1%	0%	0%	0%
About customer market	19%	15%	6%	10%

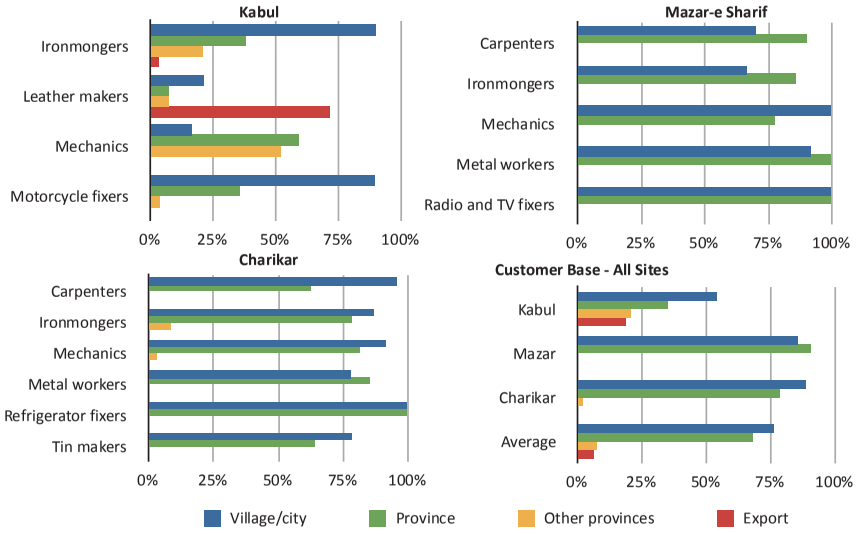
Figure 36. Knowledge Sharing and Topics



A recognizable location is often cited as the greatest advantage of being in a cluster, because customers know where to find products they need. A captured customer base is most apparent in Mazar-e Sharif and Charikar where customers come from within the town/city or the province. In Kabul, possibly due to a much higher population and being the capital city, the customer base is sparser (Figure 37).

Customer base	Kabul	Mazar	Charikar	Average
Village/city	54%	86%	88%	76%
Province	35%	91%	79%	68%
Other provinces	21%	0%	2%	8%
Export	19%	0%	0%	6%

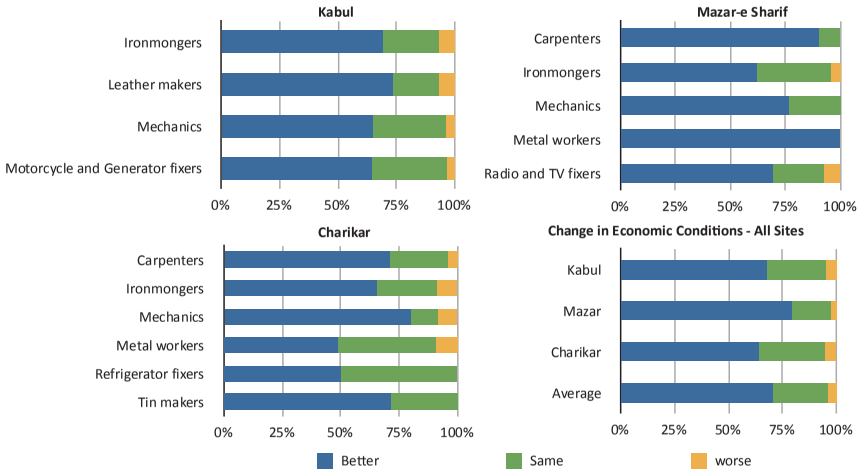
Figure 37. Customer Base



The vast majority of the clustered enterprises in all three locations reported improvement in the economic conditions, stated in terms of a steady customer base and flow of revenue (Figure 38).

Change in Economic Conditions	Kabul	Mazar	Charikar	Average
Better	67.9%	79.6%	64.3%	70.6%
Same	26.9%	18.0%	30.6%	25.2%
Worse	5.2%	2.5%	5.1%	4.3%

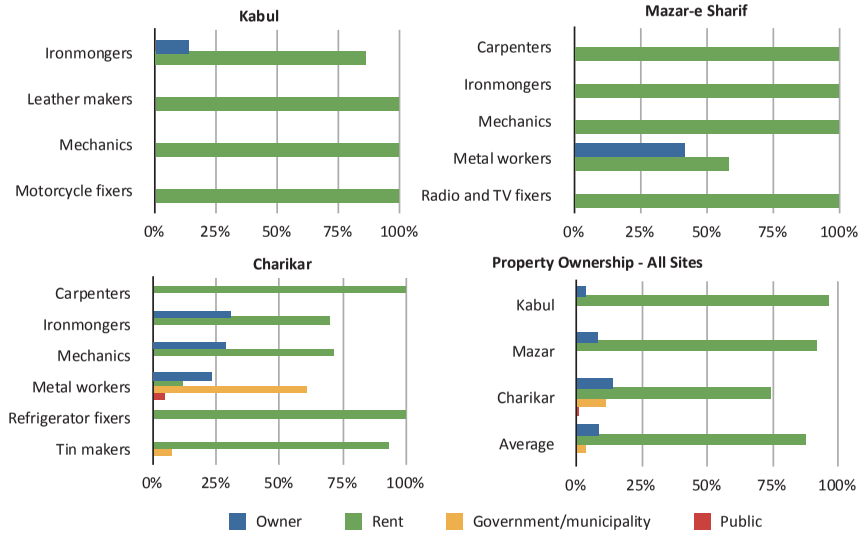
Figure 38. Change in Economic Conditions



Most of the enterprises rent their workspace. The enterprises in the metal workers cluster in Charikar have the most diverse range of arrangements from renting to ownership to legal tenancy on government-owned land (Figure 39). It may be significant to find out why only in Charikar some of the land occupied by the clustered enterprises is provided by the municipality and establish whether this is a conscious local economic development policy by the municipality.

Property Ownership	Kabul	Mazar	Charikar	Average
Owner	3%	8%	14%	9%
Rent	97%	92%	74%	87%
Government/municipality	0%	0%	11%	4%

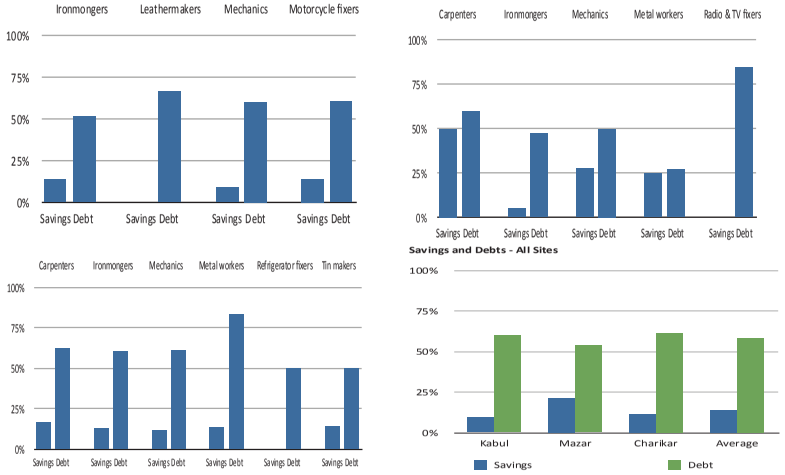
Figure 39. Property Ownership



There are significant variations in debts and savings among clusters in each location and among the three sites of this study. The key feature of all the enterprises appears to be the very high levels of debt (Figure 40).

Savings and Debts in Kabul, Mazar and Charikar	Kabul	Mazar	Charikar	Average
Savings	9%	22%	12%	14%
Debt	60%	54%	61%	58%

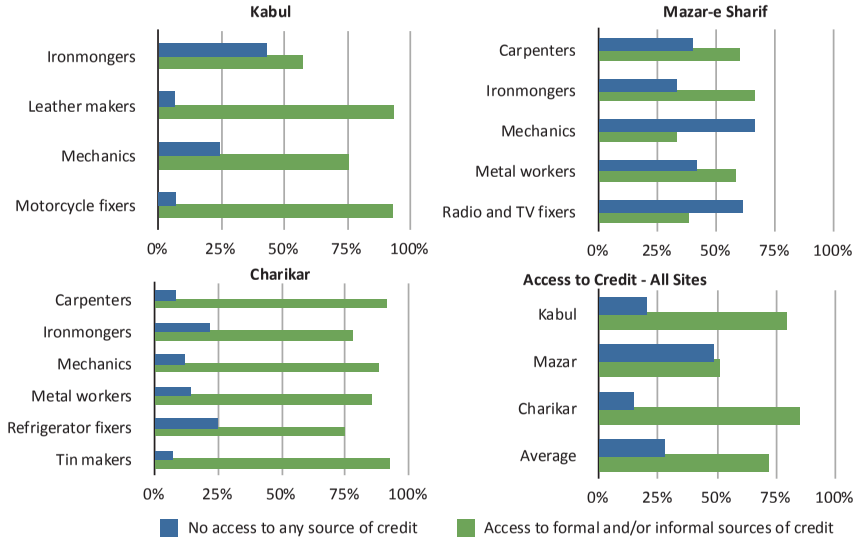
Figure 40. Savings and Debts in Kabul, Mazar-e Sharif, and Charikar



A significant number of the enterprises claimed that they had no access to any type of credit (Figure 42). Given the high levels of debt (Figure 41), this claim implies that a substantial part of the debt by the enterprises is made up of personal loans from family and kin or other enterprises.

Access to credit	Kabul	Mazar	Charikar	Average
No access to any source of credit	20%	49%	15%	28%
Access to formal and/or informal source of credit	80%	51%	85%	72%

Figure 41. Access to Credit

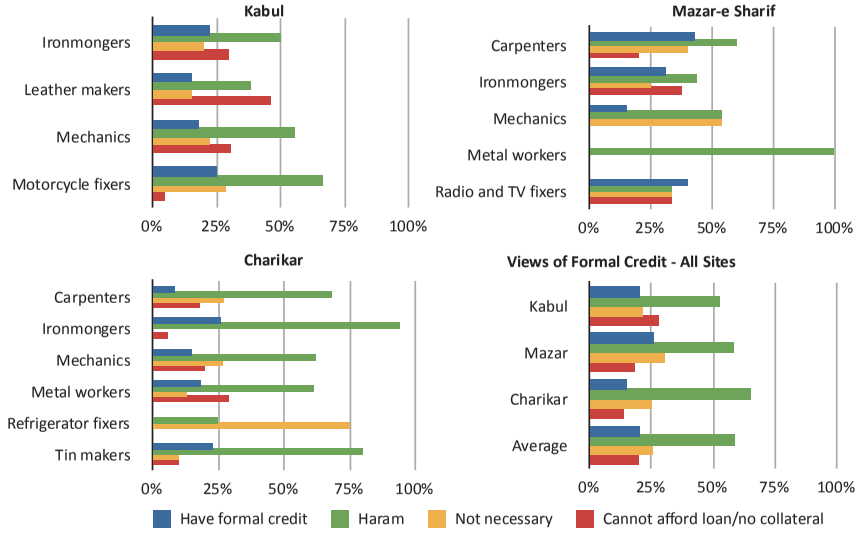


Other research has shown that paying interest on loans is a major issue for many potential borrowers in Afghanistan.[37] The enterprises were first asked whether or not they had access to formal borrowing (on interest) and how they viewed borrowing on interest. There is significant access to formal credit while a very significant number of enterprise owners view borrowing on interest as either unnecessary, *haram* (against Islamic values), or too expensive to afford (Figure 42). These findings have important implications for the forms through which business development funds should be provided to MSSEs in Afghanistan including but not limited to affordability and sensitivity to traditional norms and values. Indeed, one of the major failures in introducing microfinance in Afghanistan has been charging interest openly and without due care and respect for religion based objections to borrowing on interest. Other contributing factors to this failure are the astronomical interest charges imposed by Microfinance Institutions on the grounds that MFIs must be fully compensated for all of their operational costs through interest income.

[37] See, for example, "A Critical Assessment of Microfinance", available at: http://appro.org.af/preview/a-critical-assessment-of-microfinance/

View on and Access to Formal Credit	Kabul	Mazar	Charikar	Average
Access to formal credit	20%	26%	15%	20%
Haram	53%	58%	65%	59%
Not necessary	22%	30%	25%	26%
Cannot affords loan/no collateral	28%	18%	14%	20%

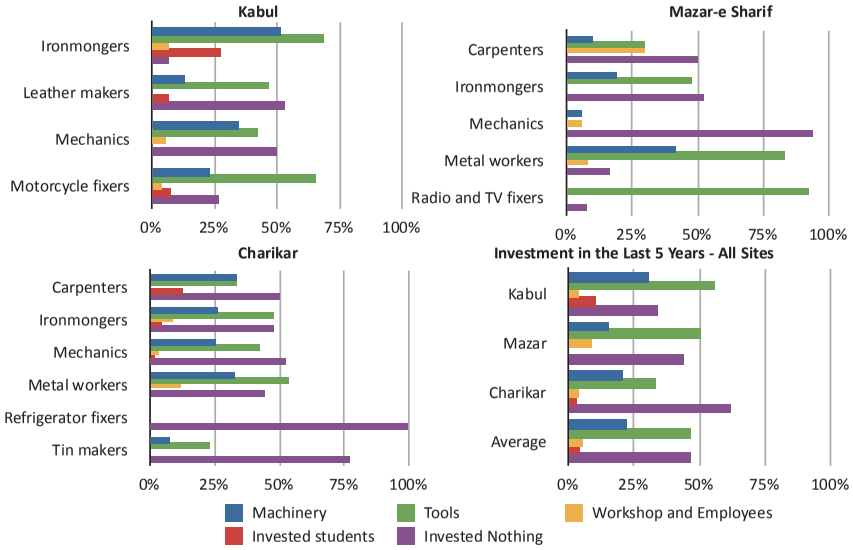
Figure 42. Access to Formal Credit and Objections to Formal Credit



Investment in ongoing business activity is varied among cluster types and locations. A very high number of enterprises have made no investment in their businesses during the last five years. Of those who have made investments, the level of investment for the same trade varies across the three locations. To illustrate, over 50 percent of the iron mongers in Kabul have made investment in machinery compared to about 20 percent in Mazar-e Sharif and about 25 percent in Charikar (Figure 43). A similarly high number of enterprises have invested in acquiring new tools, but the level of investment is quite varied across the three locations and between same trades in different locations. Also of note is the low level of investment in workspace, on employees and on the formal education of apprentices.

Investment made in the last 5 years	Kabul	Mazar	Charikar	Average
Machinery	31%	15%	21%	22%
Tools	56%	51%	33%	47%
Workshop and Employees	4%	9%	4%	6%
Invested students	10%	0%	3%	5%
Invested Nothing	34%	44%	62%	47%

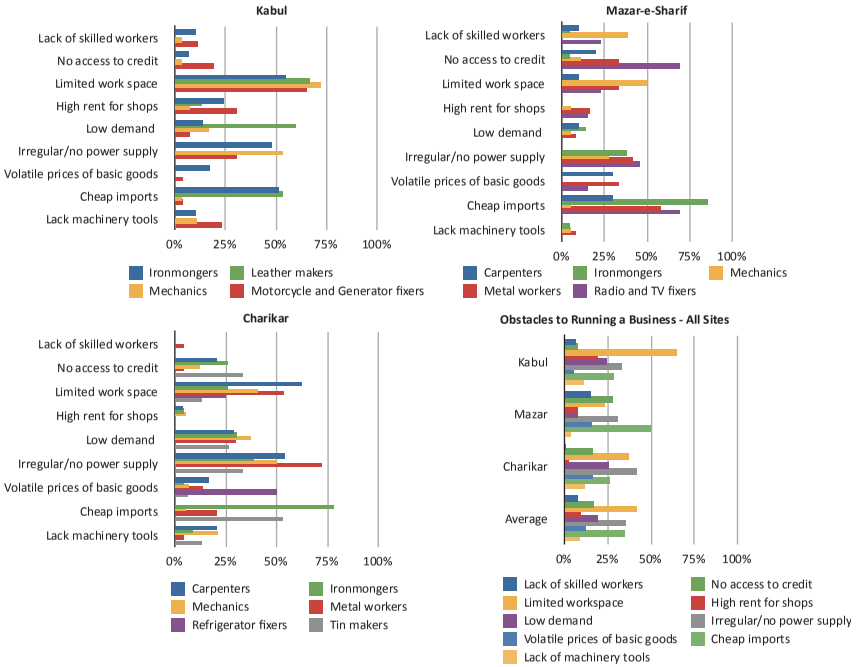
Figure 43. Investments Made in the Last 5 Years



Despite the investments made and the reported positive economic change by a significant number of enterprises, there remain numerous obstacles to better performance and business expansion. In Kabul and Charikar, for example, the enterprises have acute problems with workspace while in Mazar-e Sharif the main obstacle is the threat of competition from cheap imports. Also, in Charikar unreliable and insufficient power supply acts as an obstacle (Figures 44).

Obstacles to running a business	Kabul	Mazar	Charikar	Average
Lack of skilled workers	6%	15%	1%	8%
No access to credit	7%	28%	16%	17%
Limited workspace	65%	23%	37%	42%
High rent for shops	19%	8%	2%	10%
Low demand	25%	8%	26%	19%
Irregular/no power supply	33%	31%	41%	35%
Volatile prices of basic goods	5%	16%	16%	12%
Cheap imports	28%	50%	26%	35%
Lack of machinery tools	11%	4%	11%	9%

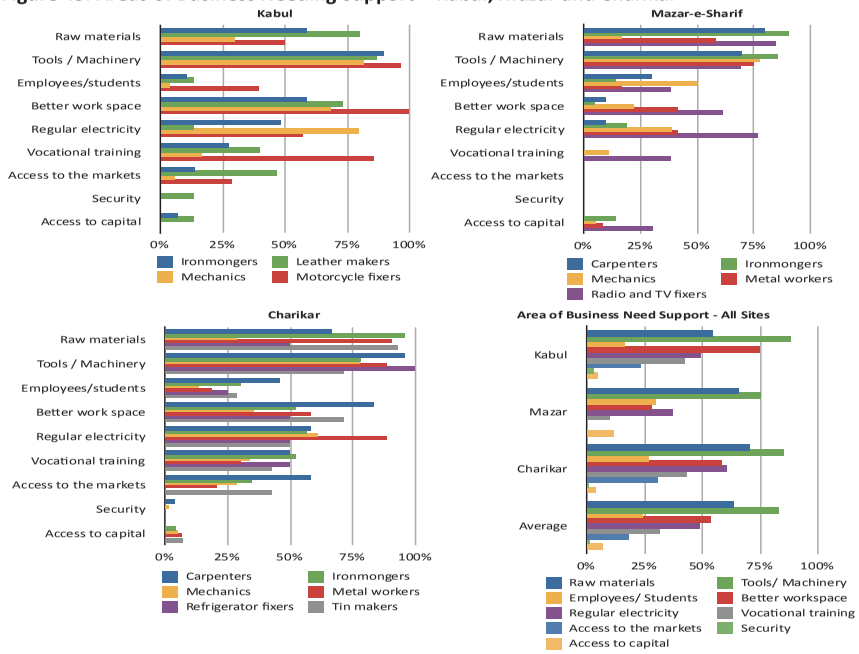
Figure 44. Obstacles to Running a Business – Kabul, Mazar and Charikar



It is worth noting that because of trade liberalization as a main guiding principle and objective of the reconstruction efforts in Afghanistan since 2001, the country imposes relatively low tariffs on legally imported goods while there is a substantial volume of illegally imported goods. The steady supply of cheap though not necessarily high quality imports competes with and is viewed as a threat to domestic enterprises producing the same goods.

Areas of business needing support	Kabul	Mazar	Charikar	Average
Raw materials	55%	66%	71%	64%
Tools/ Machinery	89%	76%	85%	83%
Employees/ Students	17%	30%	27%	25%
Better workspace	75%	28%	58%	54%
Regular electricity	50%	37%	61%	49%
Vocational training	42%	10%	43%	32%
Access to the markets	24%	0%	31%	18%
Security	3%	0%	1%	1%
Access to capital	5%	12%	4%	7%

Figure 45. Areas of Business Needing Support – Kabul, Mazar and Charikar



By default, numerous MSSEs operate according to just-in-time principle of not having high inventory levels of input materials. This is partially due to space shortage but most likely because of a financial ability to purchase bulk supplies of input materials. In Kabul the main business needs of the clusters were stated as cheaper and/or more readily available input or raw materials, tools and machinery, workspace shortages and, significantly, vocational training. Surprisingly the high need stated for raw and input materials does not correlate with access to capital (Figure 45). The motorcycle mechanics cluster had the highest number of enterprises stating a need for vocational training, followed by the leather makers, iron mongers, and vehicle mechanics.

Similarly, in Mazar-e Sharif the two highest needs are sufficient and affordable raw and input materials and tools and machinery. Shortage of electricity is cited by all enterprises as an area needing attention (Figure 45). Only the vehicle mechanics and radio and television repairers stated vocational training as a business need.

In Charikar clusters have more diverse and higher levels of needs compared to the Kabul and Mazar-e Sharif clusters. The highest needs are for adequate and sufficient raw and input materials and tools and machinery. Additional needs are apprentices, adequate and sufficient workspace, reliable electricity, and better access to markets. Also, vocational training was stated by all clustered enterprises as a need (Figure 45).

Outside larger urban centers such as Kabul and Herat, Afghanistan faces major problems with its energy needs, particularly sources of reliable and adequate electricity. Even in Kabul and Herat, where there is almost continuous electricity supply, business activity is adversely affected by unexpected outages or wide variations in voltage, often damaging electrical tools and machinery. Given this broad need, the clustered enterprises were asked about the sources of their electricity. In Kabul, the only cluster that relies fully on the city's electricity supply is the leather makers' cluster. Over 50 percent of the motorcycle repairers, over 25 percent of the iron mongers and around 10 percent of the vehicle mechanics also rely

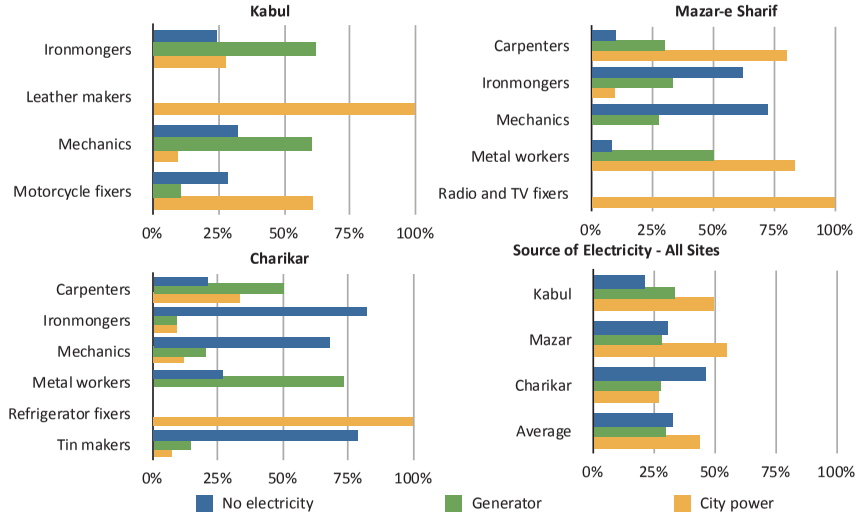
on the city's power supply. Over 50 percent of the iron mongers and vehicle mechanics rely on generators for the electricity supply (Figure 46).

A significant number of the MSSEs operate with no electricity. This points to a potential for improvements in the capacity to produce through the electrification of production processes, providing there is a sufficient and adequate supply of electricity.

In Mazar-e Sharif the radio and television repairers cluster receives all of its electricity from the city power supply. Similarly, in Charikar the refrigerator repairers cluster relies fully on Charikar's local power supply. Reliance on generator power is the highest among the enterprises of the Charikar clusters, followed by the Mazar-e Sharif clusters and Kabul.

Sources of electricity	Kabul	Mazar	Charikar	Average
No electricity	21%	30%	46%	33%
Generator	33%	28%	28%	30%
City power	49%	55%	27%	44%

Figure 46. Sources of Electricity

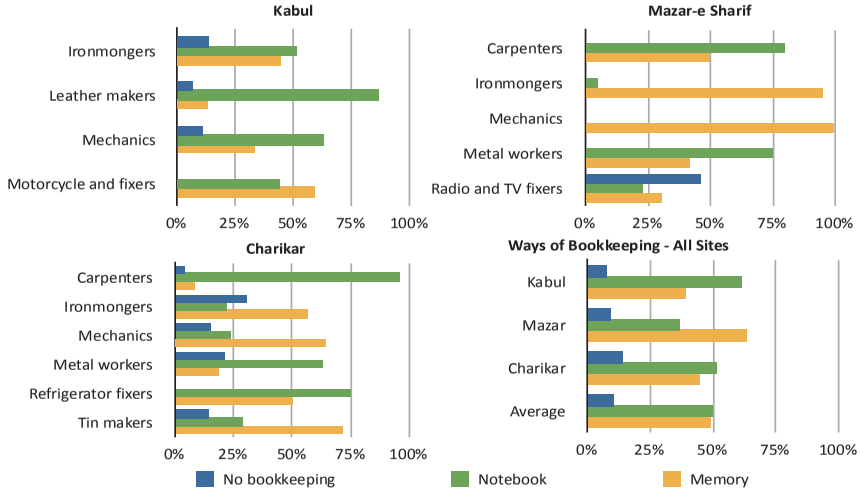


Since vocational training includes the provision of technical as well as managerial and administrative skills, the clustered enterprises were asked about how they keep track of their business transactions. Charikar appears to have the highest numbers of enterprises not having any documented system for recording transactions. In Kabul a small percentage of iron mongers, leather makers, and vehicle mechanics do not have a documented system for bookkeeping. In Mazar-e Sharif documented transactions are most common among the enterprises in the carpenters and metal workers clusters (Figure 47).

The cluster with the highest number of enterprises keeping documented transactions records is the carpenters cluster in Charikar, followed by the carpenters cluster in Mazar-e Sharif and the leather makers in Kabul. These findings point to a great need for training in business management and record keeping for MSSEs in the three sites of this study.

Business management (bookkeeping)	Kabul	Mazar	Charikar	Average
No bookkeeping	8%	9%	14%	10%
Pen and book	61%	37%	51%	50%
Memory	39%	64%	45%	49%

Figure 47. Business Management (Bookkeeping)



The next section synthesizes the key findings to highlight areas that could benefit from TVET programming.

12. Key Findings

The vast majority of the MSSEs surveyed considered themselves part of a cluster, with the exception of the Women Crafts Industry of Istalif and Refrigerator Repairers in Kabul and Mazar-e Sharif. The MSSEs who saw themselves as belonging to a cluster alluded to a wide range of relationships among cluster members. There are no significant differences between the relationships within clusters in the city and provincial towns. The remainder of this section highlights some of the key features of these relationships.

Kinship / Friendship: In Kabul and Charikar friendship, most likely through families, is the most common form of relationship among the members of same trade. In Mazar-e Sharif there is a relatively higher number of MSSEs whose personnel are not related to the personnel of other same trade enterprises. None of the clusters appears to be predominantly based on a clan-like structure. The incidence of family or kinship ties is higher in older trades such as iron mongering and carpentry than the others.

Lending and Borrowing: In Kabul the most common form of collaboration is borrowing and lending. There are also high levels of lending and borrowing tools and machinery, sharing energy sources, relying on human resources of other enterprises for rush orders, bulk purchases of input materials, and even sharing workspace.

Intensity of Collaboration: There are different levels of collaboration among the cluster members in different locations with Mazar-e Sharif being the location with the most intense levels as compared to Charikar and Kabul.

Modes of Learning: Daily face-to-face interaction among clustered enterprises is the most

widespread method of transferring knowledge and learning, pointing to the importance of tacit knowledge.

Captured Customer Base: A captured customer base is most apparent in Mazar-e Sharif and Charikar where most customers come from within the town/city or the province. In Kabul the customer base appears to be much sparser.

Future Prospects: The vast majority of the clustered enterprises in all three locations reported improvement in the economic conditions, stated in terms of a steady customer base and flow of revenue.

Land Tenure: Most of the enterprises rent their workspace. Land titles belong to different actors including private individuals and government.

Debts, Savings, and Access to Credit: The vast majority of the clustered enterprises have access to formal and informal credit. All enterprises have higher levels of debt than saving. A very substantial number of enterprises object to borrowing on interest as being against Islamic values. Many enterprises also find formal loans to be expensive or inadequate to their needs.

Investment: Investment in ongoing business activity is varied among cluster types and locations. A very high number of enterprises have made no investment in their businesses during the last five years. The purchase of tools and machinery is the most common form of business investment, followed by workspace improvement and education for employees.

Market Environment: Afghanistan has a liberal, market-oriented economy. To many of the clustered enterprises the open economy is a major and continuous threat. By default, numerous MSSEs operate according to the just-in-time principle of not having high inventory levels of input materials. This is partially due to space shortage but most likely because of financial scarcity to purchase bulk supplies of input materials.

Business Needs: In Kabul the main business needs of the clusters were stated as cheaper and/or more readily available input or raw materials, tools and machinery, workspace shortages and, significantly, vocational training. The motorcycle mechanics cluster in Kabul had the highest number of enterprises stating a need for vocational training. In Mazar-e Sharif the two highest needs are sufficient and affordable raw and input materials and tools and machinery. Charikar clusters have more diverse and higher levels of needs compared to the Kabul and Mazar-e Sharif clusters. The highest needs are for adequate and sufficient raw and input materials and tools and machinery.

Infrastructure: In addition to the general need for more work and storage space, the shortage and inadequacy of electricity is cited by all enterprises as an area needing attention. Although a significant number of the MSSEs operate with no electricity, businesses that rely on electricity are adversely affected by unexpected outages or wide variations in voltage, often damaging electrical tools and machinery. Reliance on individual or communal generator power is quite common among clustered enterprises.

Business Management Needs: The vast majority of the clustered enterprises do not have a system to document their business activity and transactions.

13. Conclusion and Recommendations

There are numerous forms of lending and borrowing among clustered enterprises including money, tools and machinery, energy sources, human resources for rush orders, bulk purchases of input materials, and even workspace. The multiplicity of collaboration among clustered enterprises could serve as a firm foundation on which to develop formal standards of workmanship through training or certification at TVET training centres.

The potentially high demand for microcredit and other financial products among the clustered

enterprises must be contextualized in the fact that there is also widespread opposition to borrowing money on interest. The presence of high demand for credit is nevertheless an opportunity for intervention through vocational training to raise awareness about and usefulness of modern banking as a potentially positive source for business modernization and expansion. In so doing, attention must be paid to cultural sensitivities and religious values and learning from the disappointing outcome of introducing microfinance in Afghanistan.

A large number of businesses do not keep formal records of their business activities, including transactions. Since vocational training includes the provision of technical as well as managerial and administrative skills, the clustered enterprises need to also be trained on the benefits of documented business activity including bookkeeping.

There are major structural issues that constrain the improved performance and expansion of the clustered enterprises. Unstable and arbitrary land tenure arrangements are a general concern throughout Afghanistan due largely to the decades of conflict and antiquated zoning laws. This instability can act as a deterrent to business expansion or moving to a more optimal business location. Also, the inadequacy and insufficiency of energy supply are other main deterrents to more efficient operational performance.

The preoccupation of the national government with other major issues, such as security and worries about the national prospects in the post-2014 period, warrants a local focus for the interventions to support Afghan businesses. This approach would be consistent with "local economic development" (LED) as advocated by the World Bank, for example.[38] The approach would involve local municipalities, the local private sector and particularly the clustered enterprises such as those surveyed for this research, and the international donor aid organizations with mandates to develop the business sector in Afghanistan and expand productive economic activity.

[38] See: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTURBANDEVELOPMENT/EXTLED/0,,contentMDK:20185186~menuPK:399161~pagePK:148956~piPK:216618~theSitePK:341139,00.html

In local economic development the focus is on increasing the competency and competitiveness of existing businesses, an approach that is also key for building and expanding cluster activity. Assistance provided for businesses should thus include physical infrastructure, secured supply sources, access to markets, and access to finance. In Afghanistan the Community Development Councils (CDCs) can play a major role by adopting local economic development strategies based on in-depth knowledge of the pre-existing forms of business organization, such as the clustered enterprises surveyed for this research.

TVET programming can thus be more systemic if delivered through or in conjunction with CDCs which are also capable of supporting local businesses, promoting new enterprises, attracting external investment, investing in physical infrastructure, and, working closely with municipalities, promoting zoning decisions that do not undermine MSSEs but support them.

Recommendations

- Energy and land tenure constraints have major adverse impacts on MSSEs. Since these two issues are unlikely to be addressed immediately, TVET programming must be designed to achieve long-term results despite these constraints.

- Much more use needs to be made of working with local authorities such as CDCs and municipalities as local-level formal structures of governance. At a higher level, attempts need to be made to bridge relations between the senfs and etehadias on the one hand and local authorities such as CDCs and municipalities on the other.

- Public forums and conferences should be organized to raise awareness about the potentially important role clusters can play in economic development and growth. Such initiatives should also be used as starting points for ongoing consultation and dialogue with the relevant actors ranging from the local shuras to the CDCs, municipalities, and provincial and national

authorities.

- Awareness campaigns targeting MSSEs must accompany such interventions as TVET programmes and the introduction of microfinance. The focus for such campaigns should be to address cultural and religious concerns and to alert the business communities to the advantages of having documented business management systems, formalized training, and the utilization of the modern banking system. A parallel awareness campaign must target the financial sector and sensitize them to the needs of the MSSEs.

- TVET programming should be viewed as a complement to, and not a replacement of, the traditional apprenticeship system prevalent in clustered enterprises.

- Cluster analysis such as presented in this report should be viewed as a baseline study for close and ongoing monitoring of clustered economic activity. TVET programming objectives are likely to be more realistic and achievable if based on findings from the monitoring of clusters' needs.

Appendix 1: Survey Questionnaire (Parts I and II)

Survey question for craftsmen

Name of province: .....
Name of craft: .....
Name of respondent: .....
Name of interviewer: .....
Contact number:.....
Name of the Senf (Class).....

Personal profile

1. Age:

2. Ethnic affiliation
- Pashtun
- Tajik
- Uzbek
- Hazara

3. Level of education:
- No formal education
- Literacy trainings
- Vocational and technical training (specify):.....
- Religious studies
- Up to primary school
- Up to secondary school
- Up to high school

4. No. of persons in household:
- ( )

5. No. of persons who have income in your family:
- ( )

6. In average, what is your family income per month?
- ( )

7. How did you learn this craft?
- From my family members
- From my relatives
- From my teacher who is a stranger
- I learned it outside the country
- Other (please specify)

8. Before you became a teacher how many years were you busy with the craft as a student?
- ( )

9. How many years have you been busy with this craft?
- ( )

10. What kind of services do you offer?
-
-
-

11. Do you have workers (Karger)?
- Yes
- No

12. Who are your workers (Karger)
- My family members
- My relatives
- My friends
- Formerly unknown
- Other (please specify)

13. How much salary do you pay for your worker per month?
- ( )

14. What skills do your workers have?
-
-
-

Workshop (Karga)

15. What negatively affects the teaching of your students?
-
-
-
-

16. What resources are needed for the students to learn better?
-
-
-
-

17. How does your student's education and skills relate to your business revenue and profits?

18. Do you receive any material assistance for training students?
- Yes
- No

19. If yes, What type?

20. What criteria does a student have to have to be accepted as a teacher?

21. Who introduces a student as a teacher?
- Union
- From his teacher
- Others (Please specify)

22. When a student becomes a teacher is this process documented?
- Yes
- No

23. If yes, how?

Student:

24. In average how many students do you have in winter?
- ( )

25. In average how many students do you have in summer?
- ( )

26. What is the age of your students?
- 10-15
- 16-20
- 21-30

27. For how long are these students busy working in this workshop?
- ( )

28. How did they become an apprentice?
- They were introduce by their parents
- They joined on their own
- They were introduced by an area representative
- They were asked by you to join
- Others (Please specify)

29. Do you pay a salary to your students?
- Yes
- No

30. If yes what is the amount of the salary in Afghani?

- ( )

31. On what do you determine the salary?
- Skills
- Age
- Hours of work
- Relationship
- Other (Please specify)

32. During a week of summer how many hours do your students work?
- ( )

33. During a week of winter how many hours do your students work?
- ( )

34. What are the students doing in their free hours?
- They are jobless
- They are going to school
- They are working somewhere else
- Other (please specify)

35. When you hire the students who vouches for them?
- Representative of the area (Wakila Gozar)
- Their parents
- The head of Nahia (administrator of the area)
- The union
- The head of senf (class)
- There isn't any guarantee
- Others (Please specify)

36. What skills do your students have?
-
-
-
-

37. What trainings are needed that you cannot provide for your students?
-
-
-
-

Class (Senf)

38. What does the union do for you?
- They are trying to have craftsmen together.
- They are solving our problems.
- They are helping us sell our products.
- They appreciate us.

- They are doing nothing.
- Other (Please specify)

39. What does the head of Senf (class) do for you?

. He is a communicator between us and union.
- They solve our problems.
- They send our problems to officials
- Other (Please specify)

41. What does Anjomin do?

42. In what way do you help these Anjomins, Unions and Senfs?
- We pay membership fees
- We help them during solving the problems
- We participate in their meetings
- Nothing
- Other (Please specify)

43. Do your students learn from each other?
- Yes
- No

44. If yes, How?

45. Does a teacher teach students from different workshops in a group?
- Yes
- No

46. If yes, How?

Cluster Survey (Part II)

47. Are you working within a cluster?
- Yes
- No

48. What are the main obstacles to running/ or expanding your business?
- Lack of competent employees
- No access to credit/loans
- Limited space in the store
- High rent
- Too much competition
- Too little demand for my products and services (structural)
- Problems with supply lines
- Unstable prices
- Paying taxes
- Paying other fees
- Volatile demand (conjectural)
- Burden of debt
- Energy shortage
- Other (specify)…….

49. Do you have problems with government officials?
- Yes
- No

50. If yes, with whom do you have problems?
- Police
- Employee of the district office
- MoIC
- MoJ
- Municipality
- Other (Please specify)

51. What type of investments did you do in the last 5 years?
- Machinery
- Tools
- Extra employee(s)
- Training
- Other (specify) ……

52. What types of investments are necessary?
- Machinery
- Tools
- Extra employee(s)

- Extra student (s)
- Training
- Other (specify) ……

53. What kind of taxes do you pay?
- Export tax
- Import tax
- City tax
- Vat tax
- Loan tax
- Other (specify) ….

54. What inputs do you need for your business? Can you specify if possible?

Raw materials	Machinery/ tools	Labour	Work space /storage	Energy (gas/ electricity	Other (specify)

55. What are the other expenses of your store?
-
-
-

56. When you started your activities how much was your capital?
- ( )

57. Are there other sources of revenue for your shop?
- Yes
- No

58. How much total profit do you have from your store on average per month?
- ( )

59. Do you have any savings?
- Yes
- No

60. If yes, what is the amount in (Afs)

61. Do you have debts?
- Yes
- No

62. If yes did you have it from a bank?

- Yes
- No

63. What is the amount in Afs?
- ( )

64. If no why?

65. What would you primarily use it for?
- For my treatment
- For my family member treatment
- For my relative's wedding
- For buying tools for my shop
- I'd give it to another person as a loan
- Other (Please specify)

66. How do you do bookkeeping for the store?
- I don't do bookkeeping
- Casebook
- By remembering
- Computer
- Other (Please specify)

67. Do you have a bank account?
- Yes
- No

68. About the ownership of your shop?
- It is my shop
- It is a rental shop
- It is a mortgage shop?
- Other (Please specify)

69. How much is your shop's rent per month?
- ( )

70. How much is your annual income?
- ( )

71. From the time that you started working in this craft did your economic situation:
- Became better

72. Became worst
- It is the same

73. Can you tell us why your economic situation changed?

Human capital:

74. Before starting work in this craft what you were doing?
- Trading
- Laboring
- Government employee
- Farmer
- Jobless
- Other (Please specify)

75. Did you have any training last year related to your craft?
- Yes
- No

76. If yes what type of training did you have?

77. If yes, for how long did you have these trainings?
- ( )

78. Who provided these trainings?
- Government
- NGOs
- Craftsmen
- Union
- Other (Please specify)

Customer base:

79. Who buys your stuff?
- People from the city
- People from the provinces
- People from all over Afghanistan
- People from other countries of the world

80. Did the union do anything to help sell your products?
- Yes
- No

81. If yes, listed

82. How is your relationship with other craftsmen?

Collaboration

83. 1. Do you share supply lines of raw material?
- Yes
- No

84. 1. In what ways do you share labour?

85. Do you share machinery and / or tools?
- Yes
- No

86. If yes, in what ways do you share machinery and/ or tools?

87. Do you share workspace/ storage?
- Yes
- No

88. If yes in what ways do you share workspace/ storage?
89. What type of electricity do you have access to?
- Nothing
- Generator electricity
- City electricity
- General city electricity
- Other (Please specify)

90. Do you share energy (gas/ electricity/ wood) with other craftsmen?
- Yes
- No

91. If yes, in what ways do you share?

92. What type of water do you have access to?
- Nothing
- Tap water
- Well water
- Mineral water
- Other (Please specify)

93. What kind of garbage collection services are in the workplace?

94. Do you share financial capital?
- Yes
- No

95. If yes, in what ways do you share financial capital?
- We give loans to one another
- We give Hasana Loans to one another
- We give short period loans to one another
- We give loans and ask for profit
- Other (Please specify)

96. Do you share information?
- Yes

- No

97. If yes, in which area(s) do you share the information?
- About supply lines
- About production processes
- About tools
- About marketing
- About bookkeeping
- About customers
- About tools
- Other (Please specify)

98. How do you share your information?
- Imitation
- Instructions
- Informal meetings
- Other (Please specify)

99. Do you help with problems?
- Yes
- No

100. If yes, in what kind of situations do you provide help?
- Whenever they ask me
- In case of emergencies
- Other (Please specify)

101. In what ways do you help with problems?
- Financially
- I give advice
- I help in work
- Other (Please specify)

102. Do you share your customers/ market?
- Yes
- No

103. If yes, in what ways do you share your customers/ market?
- I refer customers
- We take orders together
- We try to expand the market together
- We have a joint captured customer base
- Other (Please specify)

104. Are their other ways you collaborate?

Competition:

105. In what ways is your store different from the other stores? (List all)

106. In what ways do you compete with the other stores? (List all)

Appendix 2: Survey Questions for Apprentices (First Round)

General information

8. District:
9. Name of Interviewer:
10. Name of respondent:
11. Name of workshop:
12. Telephone No:
13. Age:
14. Nationality:

15. What is your highest level of education?

- I have no formal education.
- I have participated in some literacy training.
- I have participated in some vocational training.
- I have had some religious studies.
- I have had primary education (1-2 - 3 - 4-5 – 6).
- I have had high some school education (7-8 – 9).
- I have a high school degree (10 – 11-12).
- I completed university to level (1-2 - 3 – 4-5).

16. How many people are in your family?
- ( )

17. How many members of your family earn an income?
- ( )

18. Before you became a student of this workshop, what did you do?
- Day laborer
- Government officer
- Farmer
- Tended to livestock
- Other

19. Why did you apprentice in this workshop?

20. Do you work with other students from other workshops for further training?
- Yes

- No
- If yes how?

21. Since you started coming to the workshop, has your economic situation become:
- Better
- Worst
- The same

22. Can you clarify why your economic situation is changed (or has not)?

23. How much money does your teacher pay you each month?
- ( )

24. Does your teacher pay for your transportation?
- Yes
- No

25. If yes how much on a daily basis?
- 10 - 20
- 21 - 40
- 41 - 50
- 50 - 100

26. Does your teacher pay for your food costs?
- Yes
- No

27. If yes, how often
- Morning
- Lunch
- Night
- Three times

28. How many years or months have you been a student in the workshop?
- ( )

29. How did you join this workshop?
- Your parents brought you to this workshop?
- You were referred by a friend?
- A representative of the area (*wakelgozer*) introduced you to this workshop?
- Your teacher brought you?

- Other

30. What is your pay based on?
- Your experience
- Your economic situation
- Your age
- Other

31. How many hours a day do you work?
- ( )

32. Which are the qualifications to become a teacher?

33. Do you go to school or university?
- Yes
- No

34. If yes, you are in which class?
- (1. 2. 3. 4. 5. 6. 7. 8. 9., 10., 11., 12)

35. What relevant career skills do you possess?

36. Where did you learn these skills?

37. What things do you need to learn better?
- Supplies for work
- Teacher
- Dress
- Food
- other (please clarify)

38. How many hours a week are you taught by your teacher?

39. What kind of skills related to work have you learned from your teacher?

40. What is your relationship with your teacher?
- He is your family member?
- He is your relative?
- He is your friend?
- Other

Appendix 3: Socio-economic Profile of Apprentices

Name of province: .....
Name of craft: .....
Name of respondent: .....
Contact number:.....

Interviewee type:

Ironmonger students	☐
Car Mechanics students	☐
Metalworkers students	☐
Tin Makers students	☐
Carpenters students	☐

Module 1, Personal profile

41. Age:
42. Ethnic affiliation
    - Pashtun
    - Tajik
    - Uzbek
    - Hazara

43. What is your marital status?
    - Married
    - Single

44. Level of education:
    - No formal education
    - Vocational and technical training (specify):.....
    - Religious studies
    - Up to primary school
    - Up to secondary school
    - Up to high school

45. What is your father's level of education?
    - No formal education
    - Vocational and technical training (specify):.....
    - Religious studies
    - Up to primary school

    - Up to secondary school
    - Up to high school

46. What is your father doing?
    - Jobless
    - Farmer
    - Own Business
    - Government employee
    - Other (specify)

47. How did you decide to become an apprentice?
    - By your family members
    - by yourself
    - by your relatives
    - by your friend
    - by your master

48. How long have you been working as an apprentice?
    - ( )

49. What were you doing before becoming an apprentice?
    - I was a student
    - I was a child
    - I was jobless
    - I was busy with housework
    - Other (specify)

50. What are the benefits of being an apprentice?
    - Receiving salary
    - Learning a craft
    - It will save me from unemployment
    - It will give me a better future

51. When you help other craftsmen what are the reasons?
    - For collaboration
    - For more learning
    - To get paid
    - Other

52. How much salary do you get per week?
    - 100 AFs
    - 300 AFs

- 500 AFs
- 1000AFs

53. What benefits do you get?
    - Food
    - Accommodation
    - Transportation

54. If you could go to a vocational school, when could you attend such a school:
    - Morning (before work hours)
    - Morning (during work hours)
    - Evening (after work hours)
    - Evening (during work hours)
    - Full day(s) during the week

55. Would your master allow you to attend a vocational school parallel to your apprenticeship?
    - Yes
    - No

56. If your master does not allow you to attend vocational school, what are his reasons?

57. What are your future plans?
    - Continue working inside the current workshop and trade
    - Start my own business
    - Continue education
    - Other

Appendix 4: Focus Group Discussions For Apprentices (Second Round)

1. Why do you want to learn this trade? (Why not other trades?)
2. Do you do anything else apart from being an apprentice? (Do you have another job)?
3. What tasks have you learned so far since you became an apprentice?
4. What tasks are planned for you to learn while you are doing your apprenticeship?
5. Do apprentices compete among each other, for fun, or as part of their training?
6. Will you seek additional apprenticeship with other masters? Why?
7. How many different types of apprenticeship are there in your trade?
8. Did someone have to recommend you or sponsor you before you became an apprentice? Why? Who?
9. Did you personally have to make a guarantee before becoming an apprentice? What kind of guarantee did you give?
10. If you have work-related problems, how do you solve them?
11. Do you attend a school before or after working hours? Why?
12. Do you attend a school during the day? Why?
13. Why are you an apprentice in this trade and not others?
14. How does your master know that you have acquired the necessary skills for your trade?
15. Do you have to pass an examination like a special difficult task/ job?
16. What skills do you need to learn before becoming a master?
17. Can you describe that examination task briefly?
18. How do you graduate to a master?
19. Is there a graduation ceremony?

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