

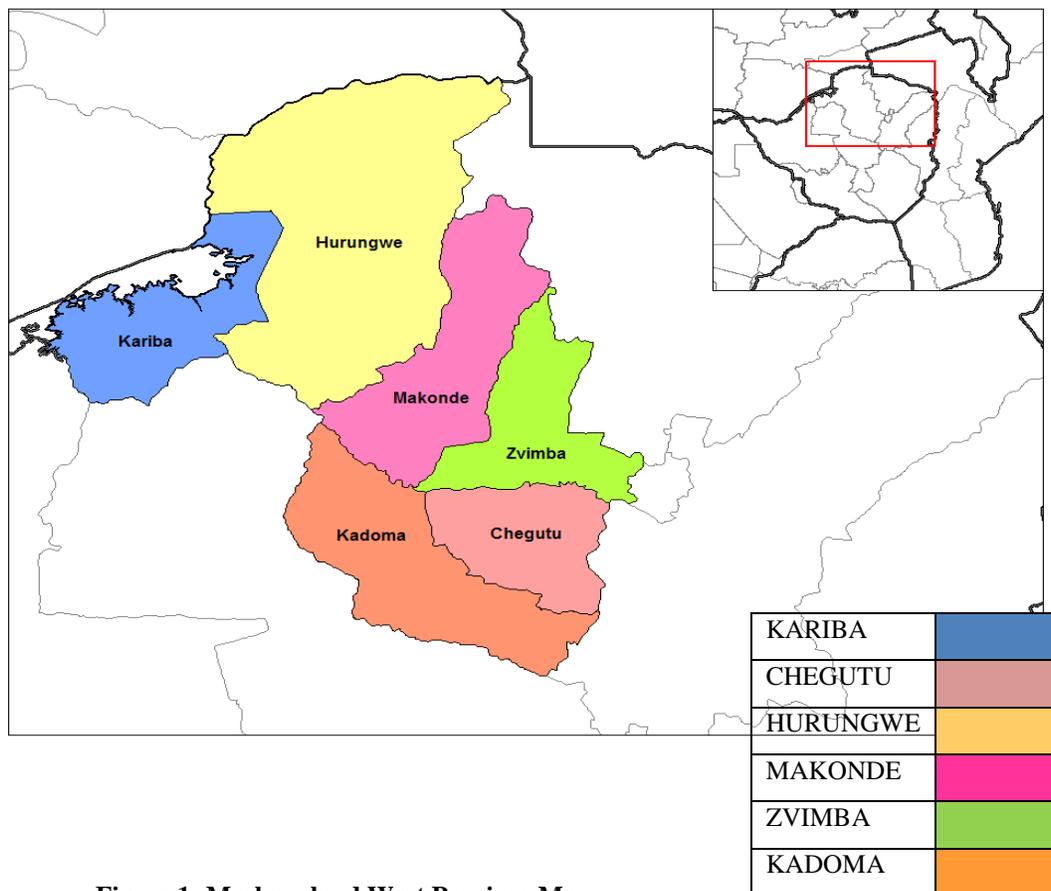
## **ENTREPRENEURIAL TRAINING NEEDS ANALYSIS IN SMALL-SCALE ARTISANAL ENGINEERING BUSINESSES IN ZIMBABWE: A CASE STUDY OF MASHONALAND WEST PROVINCE**

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### **ABSTRACT**

The purpose of the paper was to carry out training needs analysis for entrepreneurial skills in artisanal engineering small businesses in Zimbabwe. The main aim of the study was to enhance sustainability of small scale artisanal engineering businesses through training and development. Research was based on a survey of artisanal engineering Small and Medium Enterprises (SMEs) in mining, carpentry and fabrication in Mashonaland West Province. The sample chosen was based on information of registered artisanal engineers obtained from the Ministry of Small and Medium Enterprises. The study revealed that most of the practicing small scale artisanal engineers lacked Business Management Skills, Entrepreneurial skills and Technical skills. Furthermore, findings revealed that entrepreneurs required training and advice on specific areas such as: compiling a business plan; market research; identifying business and market opportunities; marketing and advertising; entrepreneurial skills training; financial and cash flow planning; networking opportunities; counselling and advice on Managing a business and risk management. This paper endeavoured to capacitate entrepreneurs with business management and entrepreneurial skills to assist them to run their businesses viably, enhance their business growth and contribute to the country's economic growth. It was revealed through the study that most curricula used for engineers focused mainly on the technical skills at the expense of the business management skills.

**Keywords:** - Entrepreneurial capacity, Entrepreneurship, Small scale, Artisanal Engineer, Artisanal engineering businesses, Training, Training Needs.



**Figure 1: Mashonaland West Province Map**

## INTRODUCTION

Worldwide entrepreneurship is regarded as a panacea to unemployment, poverty and poor economic growth. Zimbabwe has not been spared since a lot is being done to promote entrepreneurial activities and their sustainability. There have been various interventions in Zimbabwe since 1980 to equip SMEs with entrepreneurial skills, but not much growth is being evidenced (ISTARN 1994). Botha, Nieman and Van Vuuren (2006) in their study conducted in South Africa highlighted that one way of enhancing entrepreneurial activity in a country is by providing entrepreneurial training and education to potential and existing entrepreneurs. The Zimbabwean government is also placing a lot of emphasis on the development of SMEs as the major driver of equitable economic growth in the country. Currently the country is witnessing a burgeoning artisanal engineering sector that is being driven by an expansion of technology-trained graduates from the higher education sector. This is in line with government's thrust on the development of new businesses by graduates with technology training. In support, Henry, Hill and Letch (2003), allude that technical skills complemented with entrepreneurial skills enhance entrepreneurship in SMEs. The research team is advocating for sustainable entrepreneurship. The entrepreneurship advocated for promoting sustainable livelihood in terms of development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brutland Commission ,1987 )The training needs

analysis was focusing not only on the deficiencies of the current artisanal engineering business but also on sustainable entrepreneurial development. Zimbabwe is currently being dominated by small-scale Artisanal Engineers. This group's business performance mainly revolves around the expertise and skills relating to their specialization acquired in areas such as mining, machine shop as well as fabrication but lack the entrepreneurial skills to viably run their business ventures. This therefore calls for appropriate interventions to bring about qualitative turn around to the prevailing situation through strengthening entrepreneurial capacity in small-scale artisanal engineering businesses in Zimbabwe. This will be done through continuous training in the skills gaps identified which include compiling a business plan; market research; identifying business and market opportunities; marketing and advertising; entrepreneurial skills training; financial and cash flow planning; networking opportunities; counselling and advice on managing a business and risk management. It is envisaged that the proposed training will enhance business development skills which in turn will promote and support business survival. Through mentorship, the artisanal engineers' skills are gradually developed and will be refined when they are established and left to operate independently leading to continued development financially and economically. The main purpose for starting own businesses by SMEs is continued growth. There is therefore need for continuous development and empowerment of this group to enhance their survival and sustainability through equipping them with relevant information so that they remain competitive.

Zimbabwe as a country has a lot of people with technical skills, who are very enterprising, and have brilliant business ideas which, if properly nurtured would significantly contribute to economic growth. In this paper artisanal engineers refer to people within the engineering sector who are not qualified engineers, but are technically skilled. Artisanal engineering businesses refer to small scale or subsistence businesses in the areas of mining, carpentry and metal fabrication. This sector since the period 2008 to date has had an influx of welders, carpenters and illegal miners who had not received any formal training in the areas. The economic environment then allowed such flexibility since everyone wanted a source of income which has resulted in the growth of Small to medium enterprises in all sectors.

The Zimbabwean government online downloaded 17 February 2012 defines the Ministry of Small to Medium enterprise (SMEs) as a government department responsible for economic growth and empowerment through the development of Small to Medium Enterprises in Zimbabwe. It is mandated to create and maintain an enabling environment that promotes a vibrant Small and Medium Enterprises sector (SME). Major functions of the Ministry include; developing legal and regulatory framework for SMEs development; Promoting, coordinating and monitoring innovative financing schemes for SMEs and providing skills and management training that support entrepreneurship and small business growth.

It is envisaged that support to the SME sector can achieve such goals as poverty alleviation, employment creation in rural areas and empowerment of the previously disadvantaged. With the advent of the current economic reform program in Zimbabwe, the Small and Medium Enterprise sector is increasingly viewed as an engine for economic growth.

## **THE ZIMBABWEAN MINISTRY OF SMALL TO MEDIUM ENTERPRISES POLICY FRAMEWORK**

The purpose of this section is to explain the Zimbabwean policy on SMEs. The government policy should be looked at in detail because it may be one factor inhibiting growth and expansion of SMEs within Zimbabwe.

During the first ten years of independence the policies governing small business sector were highly restrictive (Kapor, Mugwara and Chidavaenzi, 1997). Studies on SMEs have revealed the advantage of SMEs being that of being more flexible and responsive to changes in the market and require relatively less capital as compared to large establishments (McPherson, 1991). Thus the government realizes the importance of breaking up the barrier created by the inherited system and developing a policy to support the SMEs development.

In July 2002, a policy document was approved which mapped out the strategies to address various obstacles facing the small enterprise businesses sector. The major goal of the policy of SMEs was stated as “to generate sustainable jobs, reduce poverty, stimulate growth and generate foreign currency thereby contributing to the well being of all Zimbabweans (Government Printers, 2002). The policy aims at creating an environment, which would make it possible for the SMEs to operate and would double its number of SMEs by 2007. The idea of SMEs development is a noble one, considering evidence from other countries as cited in the introductory section which shows how important SMEs are in other countries. The researchers’ bone of contention is on the plans instituted by the government to ensure the expansion and self sustainability of the SMEs.

The government’s major focus was establishing the SMEs sector as potential investors and their meaningful contributions to employment creation as reflected by other countries. In pursuit of their goal the following objectives were set in order to clearly define how the government, private sector and other stakeholders would encourage creation of an enabling environment (Government Printers, 2002). The following objectives will be the guiding factors;

- (a) Ensure co-ordination of different policies and programs at national level.
- (b) Provide an appropriate institutional mechanism to facilitate SMEs development.
- (c) Commit SMEs development over the long term rather than dependence on any quick fix solutions.
- (d) Set priorities and the appropriate allocation of limited public resources.
- (e) Rationalize support programs.
- (f) Co-ordinate resource mobilization strategies.
- (g) Delegate tasks, responsibilities and accountability.

### **Source: SMME Policy Framework, 2002**

The objectives cited above were set to achieve the major objective of the SMEs development. Having been guided by the economic reform program (Zimprest), Industrial policy framework, research in the area and consultations with stakeholders the SMEs policy addresses the following areas of concern;

**(i) Enabling legal and regulatory environment**

The bureaucratic requirement within the system has been a major constraint in SMEs development and also regulatory measures, which were in place, would favor large establishments (government Printers, 2002). According to Kapor *et al* (1997) “until the advent of the adjustment program 1991, extensive price controls prevented enterprises to charge prices in accordance with market conditions.” Increases in prices would require government approval but this system has since been done away with. This was done in order to allow business enterprises to charge their prices taking into account recent market charges. This would go a long way in supporting small businesses

**(ii) Investment promotion**

Investment promotion was seen as important in SMEs development; it has been observed that high interest rates and high inflation would adversely affect the SMEs (Government Printers, 2002). In the writers’ view it is quite critical for the policy makers to create a conducive environment for SMEs. The investment promotion proposed to have tax relief in SMEs and rebates discounts to support investments, reduction in tax would go a long way in supporting SMEs growth.

**(iii) Access to finance**

The two principal constraints affecting the small sector in Zimbabwe today have been observed to be limited access to finance. The major constraint to financial access has been observed to be the lack of security. This lack of security to support borrowing has led them to resort to borrowing from financial institutions whose money is quite expensive. The government proposed to introduce incentives to banks that support the SMEs financially.

**(iv) Market generation**

Access to local as well as foreign market is also a major constraint to SMEs sector identified by the government. Most SMEs lack sufficient knowledge on market opportunities and market trends. The government attempts to institute business linkages, information on market trends and also embark on quality assurance programs target at SMEs.

**(v) Technology and infrastructure support**

Infrastructure support for SMEs is inadequate. The SMEs find it difficult to identify sources of technologies appropriate to their specific activities. Studies have shown that some owners of SMEs do not even know where to procure cost effective technology to use in their enterprises. Existing institutions like Science Industrial Research and Development Center (SIRDC) and the Center for Innovation and enterprise were tasked to strengthen their programs to assist SMEs.

**(vi) Entrepreneurial management and skills development**

Lack of management skills has been cited as one of the major constraint to SMEs development. Areas of weaknesses range from financial management to marketing strategies. Some have been observed to lack the technical skills appropriate to their specific area. The SMEs skills development would be provided on the shop-floor to ensure upgrading of the SMEs system. Courses such as entrepreneurship development, business management, technical skills training etc were proposed to be

provided to the SMEs sector. The institutions of higher learning, technical colleges and vocational training centres would play an important role in this area.

**(vii) Targeted support**

The major focus of this would be the development of clusters particularly in rural areas. Clusters development would mainly be attended to by the Ministry of Gender and Youth Development. The major focus would be in rural population to venture in innovative value added employment creation.

**(viii) Relationships and partnerships**

SMMES would be encouraged to establish partnerships and joint ventures. This was identified to have an advantage of sharing skills.

**(ix) Institutional reform**

The existing institutional infrastructure for SMEs was observed to be fragmented and would need to be rationalized to ensure better co-ordination. The Ministry wishes to plan some capacity building programs with a special focus on policy formulation techniques, research methods, advocacy skills and business consultancy techniques

Source: The Policy Framework for Ministry of Small and Medium Enterprises (SMEs).

It is the interest of the researchers and other scholars to ensure that productivity of the SMEs sector increases. This would be an advantage because SMEs would develop and take “their rightful place” in the formal sector. The tricky situation here is whether appropriate systems planned as cited in the framework have been put in place such that entrepreneurs would benefit from information cited above. Thus the researcher has set t o establish factors still hindering expansion of SMEs when the paper work has been laid out. It is the view of the researchers that SMEs should graduate from informal to formal sector to boost our economy.

**SMES CONTRIBUTION TOWARDS ECONOMIC GROWTH AND SUSTAINABLE DEVELOPMENT**

Globally, Small to medium enterprises are being hailed for their pivotal role in promoting grassroots economic growth and equitable sustainable development Munyanyiwa (2009). The author further noted that in the USA and EU countries it is estimated that SMEs contribute 40-60 percent to Gross Domestic Product and 30 to 60 percent in exports. It is also highlighted that Asian Tigers such as India, Indonesia, China, Malaysia, Japan and South Korea also have thriving SME sectors contributing between 70 to 90 percent in employment and an estimated 40 percent contribution in their respective GDPs.

*In Africa, economic power houses such as South Africa, Egypty, Nigeria and Kenya, the SME sector is estimated to contribute over 70 percent in employment, and 30 to 40 percent contribution to GDP, but contribute less than 4 percent in earnings. The low export contribution is attributed to lack of skills/management capacity, product quality, production capacity, poor market access, and lack of working capital hence the sector has tended to save the bottom end of the domestic market (Munyanyiwa 2009).*

This was supported by Berry et al (2002) who reiterated that SMEs contribute about 40 percent GDP in Europe and around 30 percent in other African countries such as South Africa, Nigeria and Kenya. Empirical evidence according to Mbendi (2003) indicates that SMEs in Zimbabwe contribute less than 5 percent GDP. In this regard, an increase in GDP in Zimbabwe is possible considering the 30 to 40 percent contribution being attained by other African countries. In Zimbabwe, training institutions offering entrepreneurial training as well as the Ministry of SMEs and SEDCO should be at the forefront in promoting entrepreneurial contribution towards economic growth.

## **REASONS FOR FAILURE**

Poor management according to Schaefer (business knowhow n.d) is the number one reason for failure. New business owners frequently lack relevant business and management expertise in areas such as finance, purchasing, selling, production, hiring and managing employees. In support, Reardon (2010) added that most entrepreneurs lack knowledge on how to run a business.

An insufficient operating fund is one of the reasons for SMEs failure. Business owners underestimate the required capital in the business and they are forced to close before they even have had a fair chance to succeed (ibid n.d). Bad or non-existent budgeting is yet another reason for SMEs failure (Reardon 2010), furthermore, entrepreneurs do not have proper financial records. Schaefer (business knowhow n.d) also echoed the same sentiments when he said SMEs may also have an unrealistic expectation of incoming revenues from sales.

Another reason for failure is lack of planning. Business owners often fail to establish clear goals and create plans to achieve these goals, especially before starting out, when they fail to develop a complete business plan before launching their company (Reardon 2010). In support of this, Schaefer (business knowhow n.d) also cited lack of planning as one key reason for SMEs failure and he added that most SMEs do not have realistic business plans. Their business plans are not based on accurate and current information and educated projections for the future.

SMEs also fail because they charge very high prices in order to make a lot of money in short period of time. Schaefer (business knowhow n.d) called this starting business for wrong reasons such as wanting to make a lot of money. (Reardon 2010) also pointed out that business owners also try to accomplish too much too soon or expects to get results far faster than is truly possible.

Over 90% of the SMEs dealt with during the study confessed that their businesses were not performing well due to the above deficiencies, which therefore calls for training.

## **SUSTAINABLE ENTREPRENEURIAL DEVELOPMENT (SED)**

The traditional focus on entrepreneurship focused more on enterprise development and entrepreneurial support, however entrepreneurship for sustainable development has a strong focus towards SED, which can be defined as the continuing commitment of business to behave in an ethical way and contribute towards economic development while improving the

quality of life of the workforce, their families, and the local and global community, as well as future generations (World Business Council for Sustainable Development (2012). The training proposed for artisanal engineers should have a special focus towards sustenance of their businesses by equipping them with skills in ethical business development and their future generations survival.

While developing economic profit is central to the definition of entrepreneurship (Venkataraman, 1997 in Shepherd and Patzelt, 2011) and therefore is also part of our definition of sustainable entrepreneurship, the literature on sustainable development suggests that besides economic gains, non-economic outcomes (gains to people and society) are also important development goals (National Research Council, 1999 in Shepherd and Patzelt, 2011). The emphasis that sustainable entrepreneurs place on the generation of economic vs. non-economic gains differs across individuals and organizations. For example, for some sustainable entrepreneurs it may be sufficient to simply ensure the financial viability of their organization, but others may be primarily driven by developing economic profit for themselves. (Shepherd and Patzelt, 2011). The training to be put in place has a special focus on ensuring financial viability as well as contributing to economic development. However provision of training is an important contribution to sustainable entrepreneurship since the entrepreneurs will be equipped with skills to execute different tasks in their business as it demands comprehensive hands on.

Sustainable entrepreneurship has to be a self- initiated process and should not simply be a response to external pressure .The SMEs should be encouraged to form or join self-help networks, for example environment business, eco-efficiency and joint EMS implementation clubs. But whatever the approach taken, it should be simple and transparent (Crals & Vereeck, 2005).

## **ENTREPRENEURIAL EDUCATION AND TRAINING**

Davies, Hides and Powel (2002) in their annual Global Entrepreneurship Monitor (GEM) reported that there is an overall lack of entrepreneurship elements in the education system in most countries. This is in line with the study carried out by Orford, Wood, Fisher, Herrington and Segal (2003) in South Africa who noted that the most frequently mentioned weakness among South African Entrepreneurs was the lack of education and training.

Past and contemporary economic frameworks in Zimbabwe place a lot of emphasis on the development of SMEs as the major driver of equitable economic growth in the country. This is in line with the Zimbabwean government's thrust on development of new businesses by graduates with technology training. Technical skills complemented with entrepreneurial skills enhance entrepreneurship in SMEs (Henry et al 2003). Kolb (1984) echoed the same sentiments that entrepreneurs must possess and use analytical skills to conceptualize experience and must also possess decision making and problem solving skills in order to use the new ideas gained from experience. Orford *et al.*, (2003) collectively stated that one way of enhancing entrepreneurial activity in a country is by providing entrepreneurial training and education to potential and existing entrepreneurs. This is also supported by Hughes et al (2002) as quoted by Gray (2006) who said that "in a fast changing world of work, the ability to adapt and develop new learning and skills is a crucial ingredient in a successful economy". Gray (2006) also pointed that, exposure to training and development would ensure that owner managers and managers in small businesses are provided with some of the requisite skills for developing the change demands placed on modern organizations.

There is a positive relationship between education and business creation as acknowledged by Frank and Luthje (2002); Charney and Libecap (2000); Robinson and Sexton (1994). They also indicated that entrepreneurship can be taught and that education can enhance entrepreneurial skills, competences and attitudes. Van der Merwe and Nieman (2003) asserted that entrepreneurs require training and advice on specific areas such as: compiling a business plan; market research; identifying business and market opportunities; marketing and advertising; entrepreneurial skills training; financial and cashflow planning; networking opportunities; counselling and advice on Managing a business and risk management. In support of the above, Niyonkuru (2005) also emphasized that promoting entrepreneurial skills and attitudes provides benefit to society even beyond their application to new business ventures.

*Experience has shown that loan advancement can not substitute knowledge or competence capability. Without technical and managerial capability, financial capability or empowerment becomes parochial and self-serving. It will be erroneous to think that, once financial capability is given, managerial or technical capability will automatically follow. While large scale enterprises or corporation may require skills specialization up to some level, small scale enterprises automatically require all types' skills, in fact, generalization of skills without the required entrepreneurial expertise, huge financial provisions are wasted. Entrepreneurial skills therefore should be adequately acquired in marketing, accounting, personnel and production management. The objective must be to make them generalists instead of specialists (Ogechukwu and Latinwo 2010)*

This therefore, calls for consented efforts to build entrepreneurial capacity in the SME sector as a way to integrate it into mainstream economic activities.

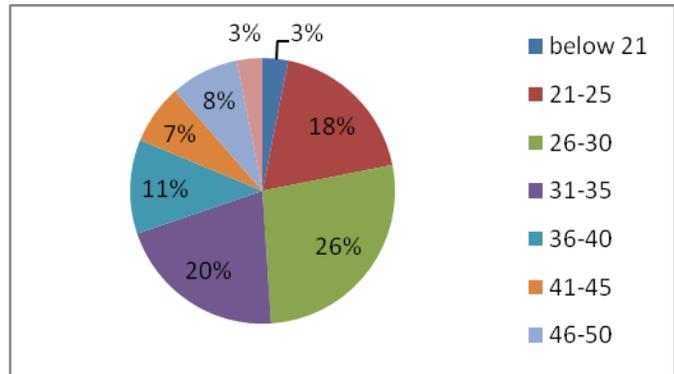
## **METHODOLOGY**

A survey was used for this study and the target group was SMEs in the engineering sectors such as mining, machine shops and fabrication in the Mashonaland West Province. The sample chosen was based on information of registered artisanal engineers obtained from the Ministry of Small and Medium Enterprises. Small purposive samples were selected because participants were willing and able to talk about their experiences and describe their feelings (Muijs, 2004). A sample of all accessible mines, carpenters and welders was taken; this was considered large enough to get a rich description of the research phenomena (Muijs, 2004 and Khotari, 2004). Data gathering instruments used in the study were a structured self-administered questionnaire for employees, a structured interview guide for management and observations. A questionnaire was chosen because of its flexibility in terms of data collection through self-administration and face-to-face encounters with participants. This resulted in 76 questionnaires being administered to employees and 84 owner managers in small scale artisanal engineering businesses being interviewed. Data was qualitatively analyzed using tables, photographs and in summary form.

## **RESULTS**

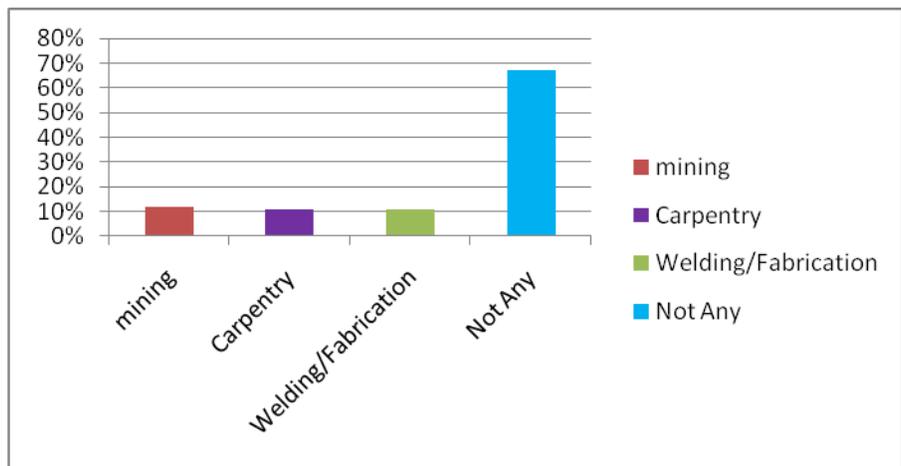
The study was carried out to identify the entrepreneurial needs of the artisanal engineers in Mashonaland west province with the intention to capacitate them in this area. The following were the results of the needs analysis carried out:

Total number of respondents who were given questionnaires was 76, that is, 93 % male and 7% female. This indicates that males are dominating in Small -scale artisanal Engineering than women. Active participation in entrepreneurship ranged from 21-40 years as shown by the percentages of people within each age range.



**Figure 2: Age groups of participants in artisanal engineering businesses.**

Most artisanal engineers are in the mining sector which has a total percentage representation of 58% followed by Carpentry which has 24% and 18% in Welding and Fabrication. The large numbers in mining can be attributed to the use of manual machines in mining which requires more employees who would work on shifts. It was also noted that out of the 44 respondents in mining only 12% had professional certificates, whilst 11% had had training in carpentry and 11% in Welding leaving a total percentage of 67% representing the majority of practicing artisanal engineers who had not received any training in any of the mentioned areas. Most of the practicing artisanal engineers constituting the 67% indicated that they gained their skills through observing experienced people performing their tasks that is on job training.



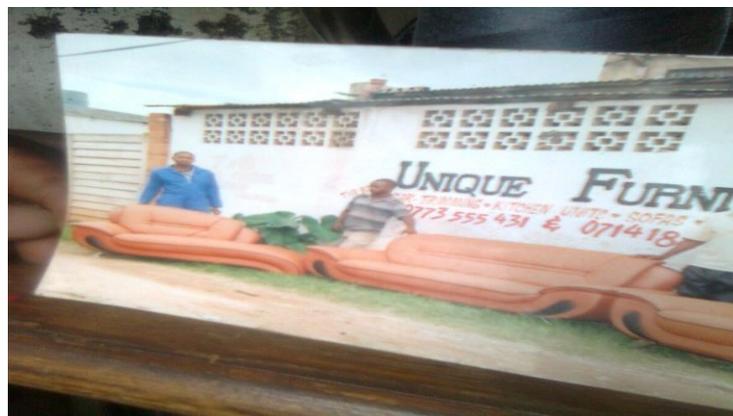
**Figure 3: Graphical presentation of professional training received by artisanal engineers**

Of those who received professional training, only 16% indicated that their training included some management and entrepreneurial modules, whilst 84% have no idea of entrepreneurship and Management. Also 8% indicated that the modules had no relevance in their areas of specialization whilst 92% agreed that they were relevant as they equipped individuals with

skills to run own businesses; improve interpersonal skills; enhance personal growth; aid in financial management; improve marketing skills and help individuals to make informed decisions.

In business management related skills, respondents cited the following training areas in which they require training; Business Management Skills, Human Resources Management, Accounts, Business Plan Proposal, Customer care, Marketing Strategies, Procurement and Record Keeping as well as Health and Safety Skills. Technically, areas of interest were; Mining Skills, Blasting Skills, Drilling Skills, Carpentry and Joinery Skills, and Welding and Fabrication Skills. The respondents indicated that technical skills would help them to improve performance, Gain in-depth knowledge about their areas of specialty, Enhance business growth and to manage accidents at work.

As observed by researchers, most SMEs had challenges in marketing their products. For instance, they relied on door-to-door selling; word of mouth; moving around with photographs of finished products and displaying finished products at the back of their workshops as shown in figure 3. Displaying finished products at the back of the workshop seemed not to be very effective since products were not visible to customers.



**Figure 4: furniture displayed at the back of the workshop**

The major challenges affecting SMEs in the artisanal engineering field included the following price wars as a result of competition; lack of capital; shortage of raw materials as a result of poor network with suppliers; poor Human Resources Management leading to high labour turnover; poor health and safety skills; lack of survival strategies; poor quality products. The above challenges were a pointer to lack of management and entrepreneurial skills by artisanal engineering SMEs.

A total of 84 respondents were interviewed in artisanal engineering businesses representing the employer, i.e the employers themselves, their managers and supervisors. In carpentry 30 respondents out of the thirty-two interviewed are not trained, one has a certificate and one has a diploma. In Artisanal mining out of 29 respondents interviewed 24 are not trained, 5 have certificates and none has diplomas. In welding/metal fabrication 17 out of the 23 interviewed are not trained, only 6 have certificates and none with a diploma.

Although record keeping is important for reference purpose in business, of the 84 respondents interviewed, 20 pointed out that they keep records, and 64 said they do not. This clearly shows that artisanal engineers place less weight in record keeping.

Respondents cited the following as risks encountered in their businesses; non- payment by customers; lack of raw materials; high rentals; pilferage; injuries of employees at work; fighting of employees underground; labour turn over; injuries from collapse of mine walls; equipment damage from power outages; low income market; fumes as a result of blasting.

The respondents cited the following as measures to reduce risks; paying attractive salaries; encouraging customers to pay cash deposits; engaging debt collectors; use of generators in case of power outages; supporting mine walls using timber; extend re-entry into mines up to 12 hours; gradual acquisition of modern equipment and materials; delay in paying salaries in order to plough it back to the business; produce a variety of products and have a 24 hour shift security.

Out of the 84 respondents 79 pointed out that there was a relationship between management and business success while only 5 said there was no relationship. However, the level of entrepreneurship among employees in the artisanal engineering businesses was said to be very low. 11 business owners and managers interviewed indicated that there was a high level of entrepreneurship among their employees, 28 said there were average levels of entrepreneurship, and 46 stated that the levels were very low.

This implies that entrepreneurial levels of employees were very low and they needed to be enhanced through training. In response to the above identified gap, the following training needs in table 2 below were recommended by owner managers.

**Table 1: Recommended training needs for employees by employers**

Training needs identified	Frequency
Business plan proposal	38
Business management	46
Customer care	14
Records keeping	31
Financial management	47
Health & safety	10
Technical skills	29
Human resources management	10
Risk management	08
Other	20

Most responses given showed that the ministry of SMEs is not effectively playing its role. 82% of participants indicated that they do not know the existence of this ministry let alone their roles. Interestingly, the other 18% pointed out that the ministry seems to use them to pursue other objectives and make promises that do not materialize. The later group also indicated that they had submitted their proposals which had not yet been actioned. To enhance development of Small Enterprises, employers and managers suggested that the ministry of SMEs in conjunction with the government help them to grow through continuous training, provision of funding, provision of conducive working environment and establishment of incubation centres in every city with modern equipment.

## **DISCUSSION OF RESULTS**

From the management interview guide, 85% of this group did not receive any training whilst 14 % had certificates and 1% had Diplomas in their areas of business. Management also indicated that the levels of entrepreneurial skills in their employees vary from average to very low. This concurs with findings from the employee analysis which revealed that 67% of the employees in the artisanal engineering SMEs had not received any form of training in any of the areas under study. This is in line with the study carried out by Orford, Wood, fisher, Herrington and Segal (2003) in South Africa who noted that the most frequently mentioned weakness among South African Entrepreneurs was the lack of education and training. Only 33% of participating employees indicated to have some form of training in form of National Foundation Certificate (NFC), Diplomas, Skills journeyman and others like blasting licenses. Of the 33% who had the above qualifications, only 16% indicated that their training included some management and entrepreneurial modules. Thus, the training they received was mainly technical and not business related. This concurs with the views of Davies, Hides and Powel (2002) in their annual Global Entrepreneurship Monitor (GEM) who reported that there is an overall lack of entrepreneurship elements in the education system in most countries. Kolb (1984) echoed the same sentiments when he said the entrepreneur must possess and use analytical skills to conceptualize experience and must also possess decision making and problem solving skills in order to

use the new ideas gained from experience. In support of the above, Niyonkuru (2005) also asserts that promoting entrepreneurial skills and attitudes provides benefit to society even beyond their application to new business ventures. 92% of participating employees indicated that Management and Entrepreneurial modules were important for various reasons including; improving performance; equipping one with skills for running own business and enhancing business growth. This therefore calls for the need to strengthen entrepreneurial and management skills in artisanal engineering businesses.

Further findings were that artisanal engineering SMEs have weaknesses in the following areas; Poor skills, poor product range, poor marketing strategies, and poor networking with suppliers. These weaknesses are a pointer to lack of training in management and entrepreneurial skills as supported by Orford et al (ibid) who noted that the most frequently mentioned weakness among Entrepreneurs was the lack of education and training. On the other hand however, the strengths observed among participants were that there was room for idea sharing and that they were also positive about acquiring entrepreneurial skills. This therefore implies that imparting entrepreneurial skills to this group of SMEs is possible and would go a long way in strengthening entrepreneurial capacity and improve productivity.

Challenges faced by artisanal engineering SMEs apart from the above include; competition including price wars, lack of survival strategies, poor human resources management, poor quality products, lack of capital and poor health and safety skills. These challenges are a pointer to lack of adequate entrepreneurial and technical skills which are a cause for concern in this research. The government policy document on SMEs has also cited the lack of management skills as a major constraint to SME development (government printers 2002).

Other observations made in relation to health and safety especially in the mining sector, were that most employers were exposing their employees to dangerous working conditions. This is evidenced by the following photographs which were taken while they performed their duties.

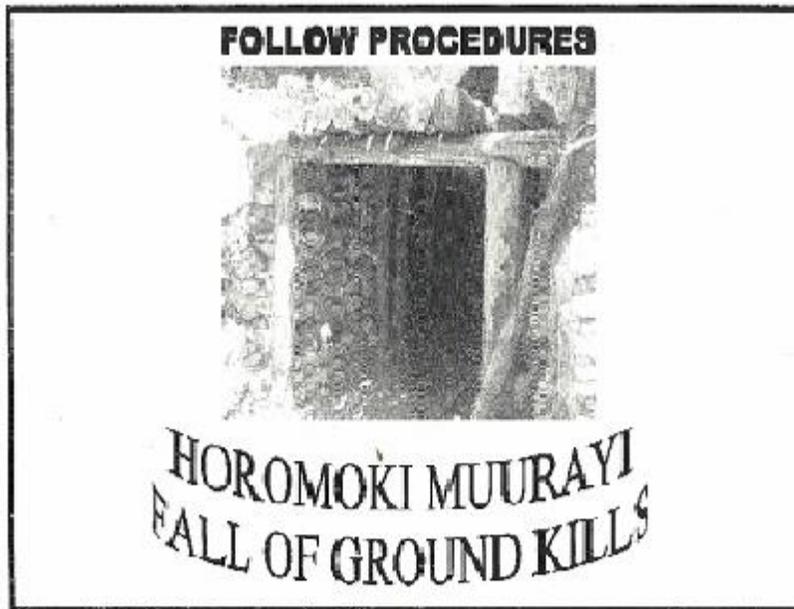


**Figure 5: Photograph showing dangerous mining conditions**

The above photograph illustrates various holes left behind as a result of poor mining methods.

Besides endangering people's lives, they also pose threat to the environment. Thus, besides offering training in entrepreneurial skills there is also need for environmental management training. The ZIMASCO Mutorashanga's Safety Health and Environment (SHE)

policy presented one option to reduce dangers of mine collapse as illustrated in figure 6 below



**Figure 6: Picture showing a recommended structure of reducing mine collapse**

The mandate of the Ministry of SMEs according to their 2006 strategic plan is to capacitate the growth of SMEs. However, 82% of participants indicated that they do not know the existence of this ministry let alone their roles. Interestingly, the other 18% pointed out that the ministry seems to use them to pursue other objectives and make promises that do not materialize. Respondents further recommended that the ministry should play a visible role to help them in form of; finance, training, resource mobilization and setting up of centralized operating premises. They further recommended that the ministry should work in conjunction with local institutions to provide training in business management skills, entrepreneurship as well as health and safety skills. These recommendations however are in line with the government policy framework and one may wonder where the delay is.

## **CONCLUSIONS AND RECOMMENDATIONS**

The secret behind the success of any business venture is largely dependent on entrepreneurial skills. As initially indicated from the above findings, there is need for concerted effort by government and other relevant stakeholders to train artisanal engineers in Business Management Skills, Entrepreneurial skills and Technical skills to enhance their **sustainability**. This is supported by the results from the study carried by out Van der Merwe and Nieman (2003) who indicated that entrepreneurs require training and advise on specific areas such as: compiling a business plan; market research; identifying business and market opportunities; marketing and advertising; entrepreneurial skills training; financial and cash flow planning; networking opportunities; counselling and advise on Managing a business and risk management. Having identified the skills gap, it was also established that embedding the concept of self sustainability through continuous interventions aimed at improving SMEs

skills would go a long way in sustaining their ventures. However, when SMEs choose to become sustainable entrepreneurs, they should be willing to devote time and effort to the project and they should select a simple, pragmatic and effective format that is tailored to their needs and compatible with their style (Shepherd and Patzelt, 2011). Developing an entrepreneurial module for practicing artisans for continuous reference would provide them with working knowledge in basic business management and entrepreneurial skills. This has been identified as one way of enhancing sustainable development.

Having identified the above weaknesses and challenges faced by the artisanal engineers, the researchers' next stage would be the development of an appropriate capacity building programme to strengthen entrepreneurial skills in this sector, through module preparation. The groups dealt with, vary in terms of training needs which means that we have to incorporate people with various skills ranging from technical to Business Management skills especially those with mining skills, welding and carpentry skills which the researchers do not possess. Also experts in Health and Safety and Environmental Management will be included in the training program. The researchers also noted that most respondents seemed not to be aware of the role of the Ministry of Small to Medium Enterprises and the researchers would invite a delegation from the Ministry of SMEs to come and outline its mandate.

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