

Job Creation and Employment-Gender-Gap among Micro and Small Enterprises

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Abstract

Micro and Small Enterprises (MSEs) sector play a key role in creating jobs in developing countries like Zambia. The sector accounts for more than eighty percent of the total employment. The main motivation behind this paper was to quantify changes in employment by size of the firm across time and to assess the gender differences in employment. For this purpose, survey data collected from two provinces of Zambia is used. Although the gender gap in the labor market is a well-established fact, the patterns of gender-employment gap is not much researched at the micro level. This paper poses two questions. To start with, is there any long haul relationship between firm age and employment. Also, to what degree micro and small scale enterprises shorten the gender employment gap across time. Persistent gender gaps in employment are not only unethical or immoral, but it is also a challenge to economic prosperity. In developing countries like Zambia, women are underrepresented in the formal sector. To answer the research questions, both descriptive statistics and Non-parametric model is used as part of the analysis. The results demonstrate that there is persistent gender-employment gap in the labor market and over the life-cycle of the micro and small enterprises. However, it is found that there is no statistically significant difference between mean employment levels and firm age.

Keywords: Employment, Gender-employment-gap, Micro and small business, Zambia

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1. Introduction

In a growing developing economy like Zambia, firms are the engine of economic growth (Hart, 1989). Notwithstanding their size and objectives, business firms or establishments engaged in production and/ or distribution activities are employers of resources, mainly manpower. The firm's choice of the employment level and gender-mix directly or indirectly relates to the production function. The production function is a production choice of the establishment that depicts the combination of inputs that is also influenced by both internal and external factors. The firm organizes the internal and external resources for the production/function of goods in order to satisfy its objective.

The expansion (growth) of the business firm is vital on the grounds that it creates more employment of resources and increases productive capability. By and large, as firms stay for more years in the market they make more employment. However, what is not certainly predictable is the degree of gender-mix in the business cycle. The challenge is by large due to the numerous internal and external factors that determine the production and employment decisions made by employers and employees. On the employment decision, knowledge of preferences and behaviors of both parties is imperative to understand what causes differences in gender employment. From the business's vantage perspective, whom to employ is one of the major decisive issues among others. The final selection (recruitment) takes a greater amount of subjectivity and individual judgements in the case of Micro and Small scale enterprises, where potential employees educational and skill level are not basically upheld by proof of evidence. The 'common belief' structured in the labor market would be a dominant factor to employ a casual, contract, permanent employee.

Since the onset of the new millennium, Zambia's economy has been one of the fastest growing in Africa. The economy grew by an average of 6.1% over the period 2003 to 2011 (OECD, 2012). Gross Domestic product (GDP)

per capita rose by 80% between 2000 and 2010 (Sutton and Gillian, 2013). Behind this impressive performance, the role of Micro and Small Enterprises (MSEs) has been undeniably critical (Gebremeskel, 2014.)

Zambia's micro and small business sector employ the lion's share of the total employed people. Based on the Zambia Business Survey (ZBS) and Labor Force Survey (LFS), it is estimated that the total number of MSMEs in Zambia was 1,050,000 which is composed of 1,020,000 (97%) from the informal (Note 1) sector and 29,350 (3%) from the formal sector. They account for 88 percent of the 4.1 million people employed. More than two-third (70%) of the MSMEs are in agriculture, 21% in retail or wholesale trade, 3% in manufacturing, 2% are in hotels, food, and beverage, and the remaining 4% are engaged in other economic activities (George et al, 2010). It is also evidenced that the formal sector of micro and small business employ more men than women. The formal sector is biased to male workers. On the contrary, most women struggle in the informal micro business without much dynamism to move their business to the formal sector, or without being employed by the same formal sector for better earnings.

The main purpose of this paper was to measure changes in employment by size of the firm. Firm size is measured by employment rather than sales, capital, or assets. This approach was followed given the fact that it is more straightforward, simple and reliable to get employment data than the other indicators of firm size. The paper additionally made an attempt to demonstrate the patterns of employment by gender over time. The paper has two empirical contributions. The first contribution of this paper is to add on existing empirical findings by examining the patterns of firms' age and employment creation. The second contribution is the analysis of employment gap (Note 2) in the business cycle of firms.

The paper proceeds as follows. In the next section I discuss the theory of labor participation in the labor market. Section 3 presents an overview of Zambia economy, labor force participation and employment, and national educational attainment data. In section 4, the method and the main quantitative results are discussed. The last section concludes the paper.

2. Literature Review

2.1 Employment-gender-gap

There are two predominant theories which are broadly discussed by researchers as a theoretical basis for the study of labor force participation. These are Gary Becker's (1965) 'Theory of the Allocation of Time' and the Human Capital Theory. The theory of time allocation states that individuals decide on their time allocation to the labor market by comparing the real wage and their reservation wage. The real wage is the wage that can be earned in the labor market. It is determined by the labor market by the forces of demand and supply. The labor demand is expressed by firms' and the supply of labor by individuals (households). The supply side is affected by an individual's education, labor market experience, training and relevant skills. On the other hand the reservation wage is the lowest wage rate at which a worker would be willing to accept a particular type of job. The idea behind reservation wage is that the same type of work and same conditions might be offered with different wages. A rational decision maker would reject an offer with the lowest wage rate. According to Prasad (2003) "The standard models of job search imply that the reservation wage is a function of the offer wage distribution, the arrival rate of job offers, and search costs."

The Human Capital Theory was developed in the 1950's and 1960's and broadly applied to the analyses of effect of formal education attainment and on-the-job training on output and productivity. The theory holds that the knowledge and skill of individuals are among the key factors to the well-being of a society. Human capital also incorporates accumulated investments in education and job training. The human capital in labor economics is to mean skills and knowledge that enhance a worker's productivity. The model underlines that factors like education, on-the-job training, skills, experience and language abilities increase employability. From the demand side, employers are willing to employ workers who possess relevant skills.

Education and training are significant labor market investments undertaken by workers (Ehrenberg and Smith, P. 290, 2000). Education is the essential means of acquiring and developing knowledge and skill which latter is used as a measure of labor quality. Much the same as any physical investment, the investment in education is made with the expectation that it will pay off well later on. One result of investment in education is to acquire a decent job. An educated person has an 'asset' that can be rented/leased to employers. He/She has a tendency to get employment and earn higher wages. Many researchers established that education is positively and highly correlated with productivity measures of workers.

Given that there are well developed economic theories that explains how the employment decision of the employer is affected by labor demand and labor supply factors, gender gap is further influenced by societal attitudes about gender roles, the type of work and, in some cases, discrimination. For instance, regarding the types of jobs, global statistics

demonstrate that women are over-represented in services and agriculture related sectors. According to World Bank (2012), women are more likely employed than men in agriculture (37% and 33%, respectively) and in services were 47% of all employed women, against 40% of all employed men. In Africa setting the informal micro business is dominated by women, whereas the formal micro, small, and medium enterprises employ more men than women. Fares et al (2006) used World Bank Microdata Development Data Platform (DPP) of 93 countries and found that schooling is a more important reason for men not to enter the labor market while home time use is more important reason for women not to enter the labor market.

2.2 Firm age and employment growth

The contribution of Micro and Small Enterprises (MSEs) in generating employment is a growing research interest in developing countries. Job creation is one major important contribution of SMEs. The estimation of job creation over the age of firms is usually done by summing up firms under consideration. Firm size, as often defined by number of workers, is the key variable considered to analyze job creation by most researchers.

The empirical findings on firm age and employment level are mixed. Haltiwanger et al (2010) used Longitudinal Business Database of US firms for the years 1976-2005 with Non-parametric regression estimation and found that there is no systematic relationship between firm size and net employment growth rate. Page and Söderbom (2012) found a similar net number of jobs created by both small and large firms. They concluded that policy/aid should be directed to create jobs in all sizes of the firms.

Many findings reached to the conclusion that small (new and matured) firms create most jobs in most countries. Ayyagari et al (2011) found that small mature firms have the largest share of employment in developing countries. Using data from 99 countries from World Bank Enterprise Surveys (ES) for the years 2006-2010 applying Log-linear regression, small firms are found to be significant contributors to employment growth even after controlling age. Acs et al (1999) used Longitudinal Establishment and Enterprise Microdata (LEEM) of US and found that gross job flow rates decline with age and with increasing establishment size when controlling for age differences.

3. A brief synopsis of Zambia's economy, labor market, and educational attainment

This section presents a brief summary on three parameters. The first is on Zambia's economic performance from 2007 up to 2014. It follows by labor force participation and employment statistics from two sources, the Zambia Labor Force survey and the World Bank Enterprise survey. The third part is on gender educational attainment.

3.1 Economic Performance

Zambia's economy has experienced a strong economic growth for more than a decade. Since 2003 average annual real GDP growth rate was 6.2% (IMF, 2013). The economy is still heavily dependent on mining, particularly copper mining. The economic achievement was because of growth in copper production, prudent macroeconomic policies, and extended credit facility arrangements. Since 2009, there is seen a rapid growth of non-traditional exports, which resulted in a surplus in the current account balance. With its substantial mineral resources and huge potential in agriculture, hydropower, and tourism, many agreed that Zambian economy will continue growing in short and medium-term periods.

Table 1. Zambia's recent macroeconomic indicators 2007-2014

Indicators	2007	2008	2009	2010	2011	2012	2013	2014
GDP constant price (Billions \$)	74.878	80.698	88.139	97.216	103.404	110.395	117.784	125.406
GDP growth rate	8.352	7.774	9.22	10.298	6.366	6.761	6.693	6.47
GDP per capita	6,183.12	6,478.16	6,872.45	7,355.37	7,584.30	7,843.37	8,101.27	8,348.68
Inflation, average consumer prices	10.65	12.45	13.39	8.5	8.66	6.57	6.98	8
Current account balance (Billions \$)	-0.754	-1.038	0.582	1.206	0.705	0.775	0.194	0.485

Source: IMF, 2014

3.2 Labor Force Participation and Employment

The impressive economic growth Zambia experienced is not reflected in equal amount of employment and labelled as 'jobless growth'. Official statistics show that there is growth in employment, but not sufficiently quick to match the rapid growth in the labor force. Despite the fact that a fast growing economy is expected to bring structural change in the economy where non-agricultural sectors absorb more labor force than the agriculture sector, this is occurring very slowly in Zambia (WB, 2013).

At 2012, Zambia's population was estimated at 14,365,719 people, with males accounting for 49.3 percent and females 50.7 percent. The data also show that the total labor force participation rate was 74.6 percent. When the total percentage is disaggregated by gender, the labor force participation rate (Note 3) for ages 15-24, female in Zambia was 69.5 percent and the male participation rate was 80.0 percent (CSO, 2013).

The Zambia Labor Force Report of 2005, 2008 and 2012 showed that the percentage of male and female employed (Note 4) people from the total employment is almost the same. The 2005 data showed that 52 percent were male and 48 percent were female. On the other hand, from the 2008 report, of the total of 5.2 million people employed, 51 percent were male and 49 percent were female.

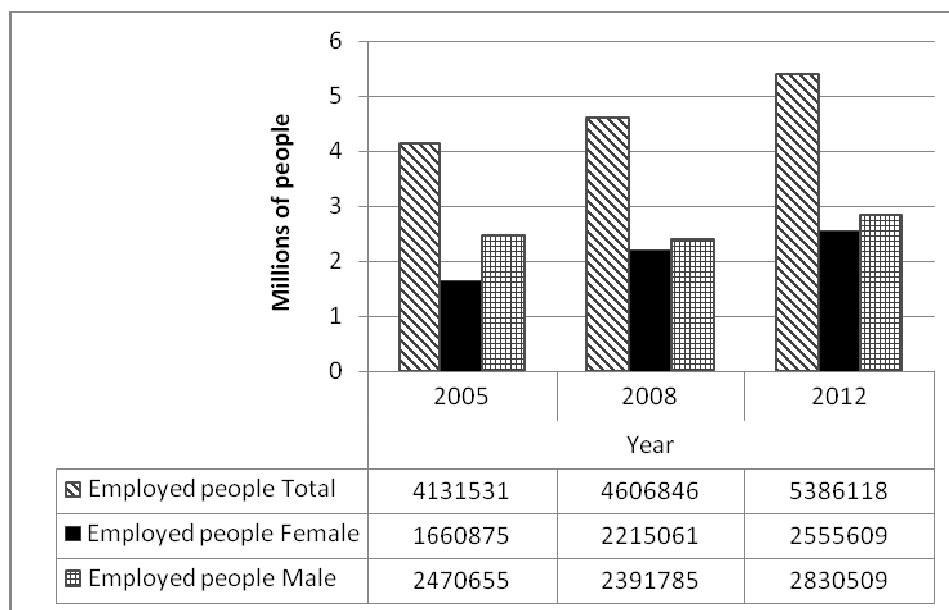


Figure 1. Zambia's employment by gender

Source: CSO, different years.

The above figure depicts that overall employment has increased by more than 1.2 million or 30% between 2005 and 2012. This is the aggregate employment created by all sectors. Disaggregating the data into formal and informal sector job creation rather shows a different picture. From the gross job created over the period 2005-2008, the contribution of the formal sector was only 3.3% (WB, 2013).

The other latest national data we have and that depicts the proportion of gender employment in the formal sectors of Zambia is the World Bank's Enterprise Survey Data. The 2013 enterprise survey covers small, medium, and large firms. It is done with a representative sample of firms in the non-agricultural formal private economy. Data was collected from 720 firms of four provinces, Lusaka, Kitwe, Ndola, and Livingstone. Table 2 below summarizes the proportion of female workers in the 720 firms and the proportions among the manufacturing firms. Unlike to the national nearly 50 percent employment proportion, the formal sector percentage of female employees is estimated at 38.1% of the total employment. Remarkably this figure is higher than to that of the world and the sub-Saharan average.

Table 2. Proportion of female workers in non-agriculture formal sectors

	Zambia	Sub-Saharan Africa	All Countries
Proportion of permanent full-time workers that are female (%)	38.1	29.8	33.3
Proportion of permanent full-time production workers, in manufacturing firms, that are female (%)	16.9	22.7	27.1
Proportion of permanent full-time non-production workers, in manufacturing firms, that are female (%)	23.3	34.2	38.1

Source: WB (2013)

3.3 Gender educational attainment

It is a well-known fact that educational attainment significantly determines labor market opportunities to women. An equal right to education is believed to be an essential condition of labor market equality. The Gender Gap index 2013 ranked Zambia at 113 out of 135 countries on the overall assessment and 121 on the educational attainment category. (Note 5) The index is made up of four categories, Economic participation and opportunity, Educational attainment, Health and survival, and political empowerment. The Educational attainment of Zambia is summarized in the table below.

Table 3. Zambia's educational attainment by gender

Educational attainment	Female	Male	Female-to-male ratio
Literacy rate	62	81	0.77
Enrolment in primary education	92	90	1.02
Enrolment in secondary education	15	18	0.83
Enrolment in tertiary education	2	3	0.67

Source: The Global Gender Gap Report, 2013

In the long-run, it is believed that economic growth and educational attainment are critical factors to actualize gender-balanced employment.

4. Method, Results and Discussion

4.1 Method

This section describes the survey dataset, the definition of SMEs and the variables used in the regression analysis. The data collection of this study was conducted in January 2013. The sample was drawn from Lusaka in Lusaka province and Kabwe in Central province. The former is the capital city of Zambia and the second is a provincial town. The participants are chosen with a stratified and systematic sampling from lists provided by the Zambia Investment Authority and the local chamber of Commerce Associations. The response rate was 93% and 187 completed questionnaires were collected.

The participants are selected by the following criteria: First, the enterprise had to be registered and in operation at least in the past couple of months. This criterion was necessary to ensure that the enterprise is within the definition of formal business (Note 6). Second, the enterprise should be either micro or small. In Zambia the firm size classification is made based on employment, investment, and annual sales turnover (See Table 5). For this study, employment criterion, the most common basis for size definition, is used as an indicator of the firm's size. The total number of employment refers the permanent full-time workers as reported in the survey.

Table 4. Micro, Small, and Medium classification

	Micro	Small	Medium
Investment (excluding land and buildings)	K80,000,000	K80,000,000 – K200,000,000	K200,000,000 – K500,000,000
Sales turnover	K150,000,000	K150,000,000 – K250,000,000	K300,000,000 – K800,000,000
Employment	1 – 10 workers	11 – 50 workers	51 – 100 workers

Source: Zambia Business Survey, 2010

Firm size is defined based on the number of permanent full-time employees by the time of the survey. Thus, an enterprise that employs up to 10 permanent full-time employees by the survey time is identified as micro enterprise. An enterprise that employs from 11 up to 50 workers is identified as small enterprise. A medium sized enterprise is a firm with total employment of more than 50 employees but less than 100 employees.

Firm age is defined as the number of years since the enterprise began operation in Zambia (Note 7). A total of three contiguous age intervals, adopting a nearly similar classification like Ayyagari et al (2011), are created. These are Less than five year, ≥ 5 and < 10 years, and > 10 years.

Like other survey dataset, the data for this study is subject to some limitations. First, the information given on employment and other variables are as reported by the respondents (Note 8). Thus the results and discussions are subject to the information provided by the respondents. Second, the sampling framework was restricted to the list provided by the Chamber of Commerce from Lusaka and Kabwe. Non-members of the Chambers were not part of the survey. Third, Because of weak representation of medium scale firms (only 1 firm is found as a medium sized) the results and discussions are limited to micro and small enterprises.

4.2 Results and Discussions

4.2.1 Descriptive statistics

This section presents the findings on the relationship between firm size, firm age, and employment across firms. In addition to frequency distributions, charts and tables are used to analyze size, age, and employment relationship. A non-parametric estimation model is also part of the analysis.

Size Characteristics of firms

Table 2 reports the size distribution of firms from our survey data. It was found that only a single firm is medium-sized and the rest is micro and small. The medium sized firm is dropped from the analysis. A little more than sixty percent (61%) of the enterprise principal owner of the business are men. A large number of enterprises, 83%, are micro size followed by small size with 16% and only a single medium size enterprise.

Firm size and employment

Table 2 reports the employment distribution of enterprises. The sampled enterprises altogether started operation with a total employment of 643 people (69.5% male) and currently engaged 1,346 (69.2% male) people in direct employment with a minimum of 1 and a maximum of 130. Nearly a quarter of the enterprises, 23.78% did not employ a single person and run by a self-employed owner. Excluding enterprises owned and run by one person, the average employment by the remaining 143 enterprises 9.1 persons. Size-wise, 83.24% of the enterprises are micro, 15.7% are small, and 1.08% are medium.

Table 5. Firms distribution by size

Number of employees	Percentage	Cumulative percentage	Type of Enterprise
1	23.78	23.78	Micro
2	10.27	34.05	
3 – 5	25.41	59.46	
6 – 10	23.78	83.24	
10 – 50	15.68	98.92	Small
More than 50	1.08	100.00	Medium

Firm age and employment by gender

Table 3 presents the employment level of firms currently and at the year they began operations with their age. The table shows that currently the 39 out of 182 firms (21%) employed 42 % of the total 1,382 people. These are the older enterprises in the data set with more than 10 years of business operation. In aggregate these enterprises have increased their employment by fourth fold from the time of establishment. The gross employment change, between current and start-up time, decreases as we go from oldest to the youngest category. Enterprises with ≥ 5 and < 10 years have doubled their employment, whereas those in the category of < 5 years increased by 42%.

Table 6. Current and Start-up employment by age of firms

	Firm Age			Total (182 firms)
	< 5 years (99 firms)	5 – 10 years (44 firms)	> 10 years (39 firms)	
Employment at start-up	392	136	142	670
Female	119	34	57	91
Male	273	102	85	210
Current Employment	555	260	567	1382
Female	177	79	178	434
Male	378	181	389	948

The table also shows that the proportion of female employees is lower than the male. The wide gap of male-female employee ratio is observed at both the start-up and current period in all the three firm age categories. Current employment shows that, irrespective of firms' age, number of male employees are nearly three times that of female employees. Though that is the case, the growth rate of female employees is almost the same as their male counterpart. The number of female employees has grown by 3.76 percent, while male employees grown by 3.51 percent between the two periods, start-up and current (Note 9).

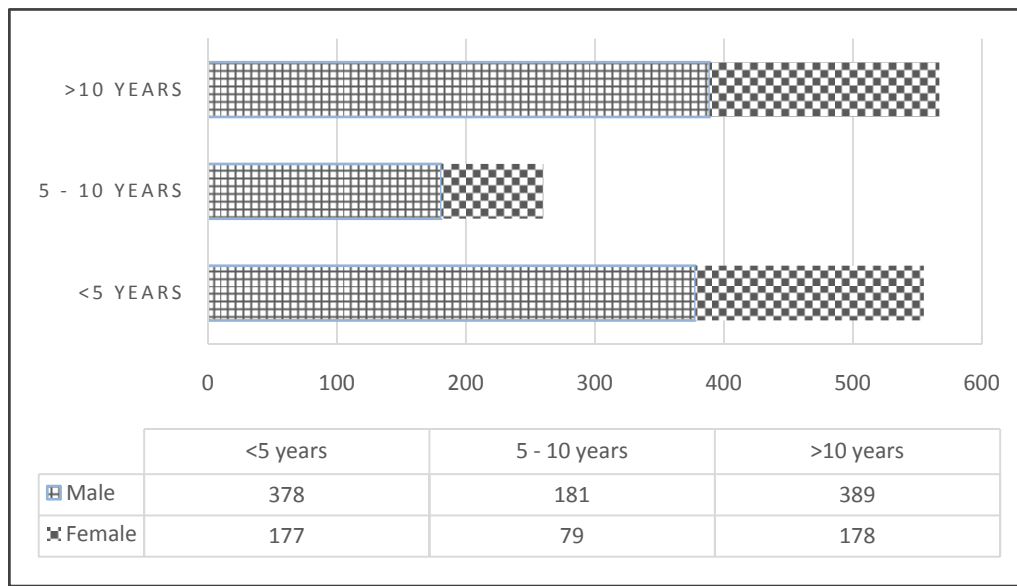


Figure 2. Firm age and current employment by gender

Employment Growth

The change in number of workers between current and start-up period is calculated and enterprises are classified into three categories. The following table shows the level of firm growth by looking at their employment change across time for those who experienced a reduction in employment from the start-up phase to the current period (Declining firms), existing firms with no change in employment (no-growth firm), and existing firms that have shown some level of growth in employment (grown firms). 63 percent of the enterprises had increased their employment by an average of nearly 5 manpower, with a minimum of 1 and maximum 65 during their existence in the business. 14 percent of the enterprises retrenched a minimum of 1 of the employees and a maximum of 21. The mean retrenchment among the declining firms (in terms of manpower) is 3 workers. 24 percent of the enterprises have not shown any change in employment irrespective of the time period they have stayed in the business.

Table 7. Enterprises performance in terms of the number of workers employed as current period compared to start-up period

	Total	Minimum	Average	Maximum
Declining firms	.14	1	3.2	21
No-growth firms	.24			
Grown firms	.63	1	4.8	65

4.2.2 Test of means difference

Mean employment by firm age

This section assess the equality or difference in mean employment among firms on the basis of the three age categories created and between male and female employees of all the firms. To this end two different tests are conducted. The first verification, comparison of mean employment by different age of firms is conducted with two independent samples test. The most common four non-parametric tests for two independent samples are the Mann-Whitney U test, the Wald-Wolfowitz Runs test, the Kolmogorov-Smirnov Z test, and the Moses Extreme Reaction test. On the other hand, comparison of mean employment by gender is done with a one sample t test.

As it shown on the diagram below, figure 3, the dependent variable, employment, does not follow a normal distribution, rather it is right-skewed.

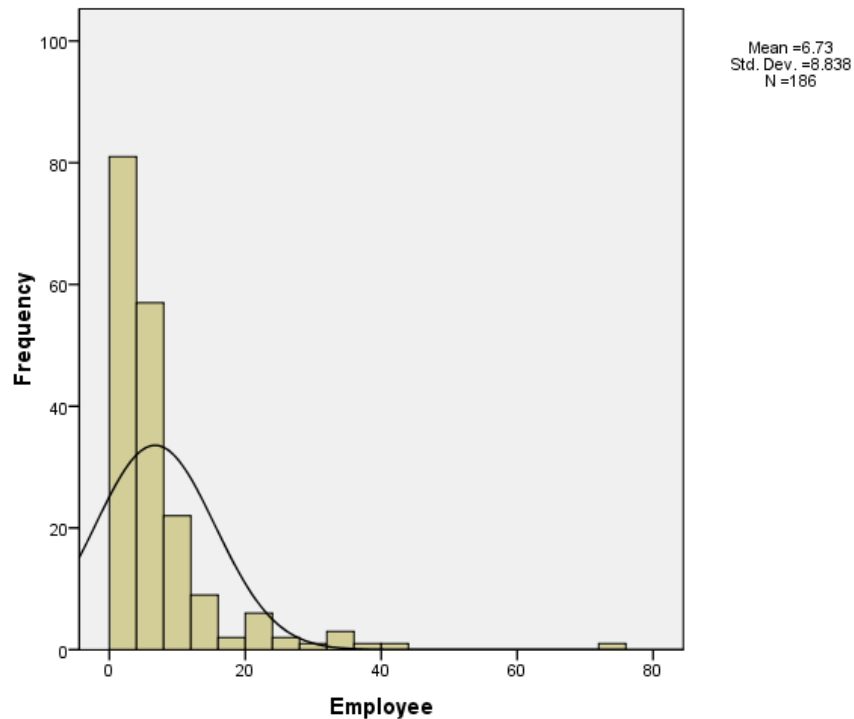


Figure 3. Frequency distribution of employment

Accordingly the two independent samples test is applied to see whether there exists a significant difference in mean employment by firms as grouped by age or not. The Mann-Whitney U test, unlike to the usual independent sample t-test, is used to differences in means of the three groups of firms. Following the grouping created for firms based on their age in table 6; aged less than 5 years, between 5 and 10, and above 10, a mean comparison is made between the groups.

Table 8 below shows the results of comparison of current employment between the groups. The first row compares two groups of firms, these are firms aged less than 5 years and those greater than 5 but less than 10 years. The second row compares those firms aged greater than 5 but less than 10 years with those aged more than 10 years. The third row compares all the three groups simultaneously. The Z statistics in both row one and row two are not significant (sig (2-tailed) 0.489 and 0.228 respectively). This means that there is no statistically significant difference between mean employment of firms aged less than 5 years and firms aged between 5 and 10 and also between 5 – 10 and those aged more than 10 years.

The third row compares all the three groups simultaneously. The chi-square result of the Kruskal Wallis Test, 0.153 shows that there is no statistically significant difference in the mean employment of the three categories of firm age. This finding exhibits that the difference in mean employment level of firms after controlling age is statistically insignificant. The mean employment level by the young and older firms is statistically equal. In other words, the result implies that no systematic relationship exists between firm age and employment from the sampled business enterprises. A particular firm age class, being young or old, does not correspond to a higher or lower mean employment. Irrespective of their age, firms exhibit the same level of employment growth rate.

Table 8. Mean employment comparison between firms age < 5 years and 5-10 years

Mean employment comparison between firms age < 5 years and 5-10 years*

<i>Firm age</i>	<i>No. of firms</i>	<i>Mean Rank</i>	<i>Mann-Whitney U</i>	<i>Z</i>	<i>Asymp, Sig. (2-tailed)</i>
< 5 years	102	71.93			
5-10 years	44	77.15	2083.500	-.692	.489

Mean employment comparison between firms aged 5-10 years and > 10 years*

<i>Firm age</i>	<i>No. of firms</i>	<i>Mean Rank</i>	<i>Mann-Whitney U</i>	<i>Z</i>	<i>Asymp, Sig. (2-tailed)</i>
5-10 years	44	39.47			
>10 years	40	45.84	746.500	-1.206	.228

Mean employment comparison among those aged <5, 5-10, and >10 yearsKruskal Wallis Test***

<i>Firm age</i>	<i>No. of firms</i>	<i>Mean Rank</i>	<i>Chi square</i>	<i>df</i>	<i>Asymp, Sig. (2-tailed)</i>
<5 years	102	87.89			
5-10 years	44	94.11	3.748	2	.153
>10 years	40	107.12			

*Grouping variable: Firm age

Mean employment by gender

In determining whether there exist gender gap or not, a one sample t test is used. Table 9 presents the findings, number employees disaggregated by gender, of the of the one sample t test. It is found that indeed there is a statistically significant difference in mean values of employed female and male works in the sampled enterprises. The null hypothesis of equal, 0.5, mean employment between male and female is rejected with significance level of .000.

Table 9. Mean gender employment

One sample t test						
Test value = 0.5						
	Number of employees	Mean	S. D.	t	Sig. (2-tailed)	
Female	434	2.98	4.218	6.928	.000	
Male	948	6.21	11.243	6.224	.000	

5. Conclusion

The main objective of this study was to analyse changes in employment by size of the firm and to assess the gender differences in employment using a survey data collected from two provinces of Zambia. The paper demonstrated the pattern of employment by micro and small enterprises taking into account firms age and size. Overall, the result shows that micro and small enterprises create jobs over time. Current employment shows that, irrespective of firms' age, number of male employees are nearly three times that of female employees. Though that is the case, the growth rate of female employees is almost the same as their male counterpart. The number of female employees has grown by 3.76 percent, while male employees grown by 3.51 percent between the two periods, start-up and current.

It is found that there is a direct relationship between firm age and employment. Taken all firms together, they have more employees now than their establishment period. In aggregate the enterprises have increased their employment fourth fold from the time of establishment, but with no change in the gender employment gap. However, a further grouping of firms by their age demonstrated mixed outcomes. The gross employment change, between current and start-up time, decreases as we go from oldest to the youngest category. Enterprises with ≥ 5 and < 10 years have doubled their employment, whereas those in the category of < 5 years increased by only by one half (42%). A further non-parametric estimation demonstrates that the variation in employment among the three groups is not statistically significant. The differences exhibited is only a reflection of the sample data but not that of the entire MSE sector. The findings is similar to that of Haltiwanger et al (2010) and Page and Söderbom (2012). There is no systematic relationship between firm age and employment growth.

Controlling firm age, it is found that the growth of employment is almost proportionally the same for both genders. The gender-gap created at the earliest stage (establishment) time persistently exists throughout the life-cycle of the businesses. This fact is demonstrated in both the descriptive and the t-statistics test. The emergence of the gap is subject to different factors in the firm, industry, and the economy at large. But the finding is vital for policy makers. They should come up with policies and strategies not only to create more jobs, but also to reduce and ultimately remove the wide gender gap existing among formal micro and small enterprises.

The findings of this paper calls for a series of future research along the same line. In addition to job creation, researchers in developing countries should also investigate the level of job destruction in order to estimate the net job creation of SMEs. A nation-wide data set should be considered for this purpose. The other area of future work is to investigate whether gender-employment-gap exists in other sectors of the economy. We need also to relay on time series data to meaningfully understand the matter. It is essential to investigate and understand the consequences of gender-employment gap.

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References

- Ayyagari, Meghana, Asli Demirgüç-Kunt, & Vojislav Maksimovic. (2011). Small vs. young firms across the world: contribution to employment, job creation, and growth. World Bank Policy Research Working Paper 5631.
- Acs, Zoltan J., Catherine Armington, & Alicia Robb. (1999). Measures of job flow dynamics in the US economy. Office of Advocacy, US Small Business Administration.
- CSO (Central Statistical Office of Zambia). (2009). "Zambia Labour Force Survey 2005." Labor Statistics Branch, Lusaka.
- _____. (2011). "Zambia Labour Force Survey 2008." Labor Statistics Branch, Lusaka.
- _____. (2014). "Zambia Labour Force Survey 2012." Labor Statistics Branch, Lusaka.
- Ehrenberg, Ronald G., & Robert Stewart Smith. (1985). *Modern labor economics*. USA. Addison Wesley Longman, Inc.
- Euwals, Rob, Marike Knoef, & Daniel Van Vuuren. (2011). The Trend in Female Labour Force Participation: What Can Be Expected for the Future?" *Empirical Economics*. 2011; 40.3, 729-753. <http://dx.doi.org/10.1007/s00181-010-0364-9>
- Fares, Montenegro Claudio, & Orazem Peter. (2006). How are Youth Faring in the Labor Market? Evidence from Around the World. World Bank Policy Research Working Paper 4071.
- Fitzenberger, Bernd, Reinhold Schnabel, & Gaby Wunderlich. (2004). The Gender Gap in Labor Market Participation and Employment: A Cohort Analysis for West Germany. *Journal of Population Economics*, 2004; 17.1, 83-116. <http://dx.doi.org/10.1007/s00148-003-0141-6>
- Harford, Alison. (2009). Predicting Labor Force Participation of Female Immigrants to the U.S. *The Park Place Economist*, 2009; Volume XVII.
- Haltiwanger, John, Ron S. Jarmin, & Javier Miranda. (2013). Who creates jobs? Small versus large versus young. *Review of Economics and Statistics* 95.2; 2013, 347-361.
- Hart, Oliver. (1989). An Economists Perspective on the Theory of the Firm. *Columbia Law Review*, 1989; Vol.89, No. 7, pp 1757 – 1774. <http://dx.doi.org/10.2307/1122818>

- Heckman, James. (2014). Introduction to a Theory of the Allocation of Time by Gary Becker. IZA Discussion Paper 2014; No.8424.
- IMF (International Monetary Fund). (2014). *World Economic Outlook Database*.
- _____. (2013). Country Report No. 14/5.
- OECD (Organization for Economic Cooperation and Development). (2014). Achieving Stronger Growth by Promoting a More Gender-Balanced Economy.
- Page, John, & Måns Söderbom. (2012). Is Small Beautiful? Small Enterprise, Aid and Employment in Africa. WIDER Working Paper, 2012. No. 2012/94.
- Prasad, Eswar S. (2003). What Determines the Reservation Wages of Unemployed Workers? New Evidence from German Micro Data. 2003; IMF Working Paper.
- World Economic Forum. (2013). The Global Gender Gap Report.
- WB (The World Bank). (2013). Enterprise Survey.

Notes

Note 1. The informal sector is defined as those not registered by Patents and Companies Registration Agency (PACRA) or any other similar organization in Zambia.

Note 2. Gender gaps in the labour market are defined as those that disadvantage women compared to men. A “positive gap” in unemployment indicates women’s disadvantage.

Note 3. Labour force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period.

Note 4. According to CSO LFS, Employed people are defined as those who are paid employees, self-employed, employers, unpaid family workers.

Note 5. The index benchmarks national gender gaps on economic, political, education and health criteria, and provides country rankings that allow for effective comparisons across regions and income groups over time.

Note 6. A business registered by Patents and Companies Registration Agency (PACRA) in Zambia.

Note 7. It was found there is a gap between licensing the business and the beginning of operations. For 76.5% of the firms business operation began on the same year when the business was registered, 9 percent the firms did the registration in a later year after operationalizing the business, and the remaining 14.5% firms first did the registration and began the operation after 1 up to 4 years.

Note 8. Maximum effort was made to interview the owner/s or the manager or the person in charge of the daily business activities of the firm. 56% of the respondents were owners/and managers, 22% were managers.

Note 9. The growth percentage is calculated with the formula $\frac{\text{Current employment} - \text{Start-up employment}}{\text{Start-up employment}} \times 100$