AN INVESTIGATION OF THE DETERMINANTS OF MARRIED WOMEN CAREER PROGRESSION IN ZIMBABWE

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Abstract— **"Mothers tend to pay a higher price for children than fathers do. Partly, as a result, they typically earn less than men and remain more vulnerable to poverty" (Becker, 1981, p. 8)." This therefore necessitates an empirical investigation of the factors surrounding married women's career progression. Their career path has been noted to be complex and different from men and it was the purpose of this study to try and model the factors affecting their career progression. The study utilised cross sectional data collected from married women with at least one birth child working in Gweru. Stratified random sampling was applied. Because of the nature of the data, the researcher utilised Count Models in Particular the Normal Count Model which performed better, in a statistical sense, than the most commonly used Poisson and Negative Binomial Models. The findings obtained indicated that age at first birth and number of children below five was significant and had the expected signs. The researcher recommended the need for delaying child birth for women however taking into consideration the health risks involved as well as reducing the number of children below five through the use of birth control methods. It is also important to have basic training especially to both boys and girls still at primary schools so as to shape their attitudes towards the roles of women in the society as well as continuous and strict monitoring of recruitment and promotion processes in organisations by government to ensure transparency and adherence to set policies on gender equality.**

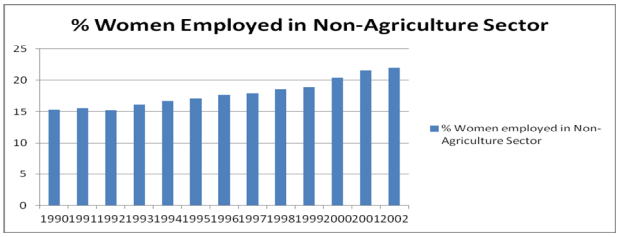
JEL classification: E24, O15, A13

Index Terms— **labour policy, married women, career progression, count models**

I. INTRODUCTION

The characteristics of labour markets in the 21st century, which were mainly dominated by males, are currently evolving with the increasing trend in women's participation in paid work (Cotter, Hermsen & Vanneman, 2001). In Africa, there has been increased women labour force participation especially in non-family employment. For Zimbabwe, in the year 2000, women made up nearly half of the country's labour force, with majorities in Agriculture, Services and Government (Ncube 2000). This is clearly depicted in Figure 1 where the percentage of women employed in the non-Agriculture sector has been increasing for the period 1993 to 2002.

Manuscript received Jan 11, 2015



Source: ZWE- Country Meta Data

FIGURE 1: Share of women employed in the non-Agricultural in Zimbabwe

However, their numbers in top managerial positions has not been increasing at the same rate. According to the United Nations (UN) Report (1980), these women constitute half of the world's population, perform nearly two thirds of its work hours and yet receive one tenth of the world's income and own less than 1/100th of the world's property. The UN Report went on further to show that on female skill levels, the rough indication is that about 60% of women in current labour force may be called unskilled, 37.5% skilled and 2.5% highly skilled.

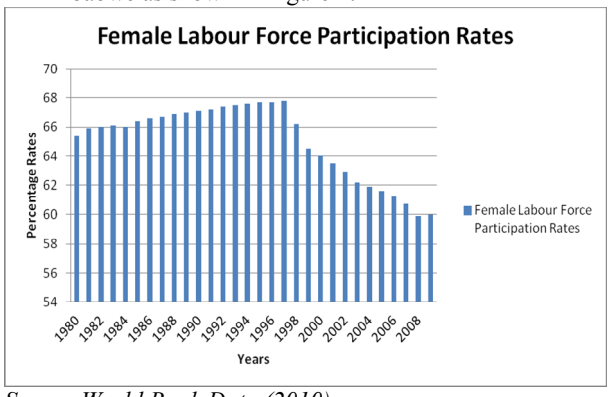
Table 1: Global labour market indicators, 1993 and 2003

	Female		Male		Total	
	1993	2003	1993	2003	1993	2003
Labour force (millions)	1,006	1,208	1,507	1,769	2,513	2,978
Employment (millions)	948	1,130	1,425	1,661	2,373	2,792
Unemployment (millions)	58.2	77.8	82.3	108.1	140.5	185.9
Labour force participation rate (%)	53.5	53.9	80.5	79.4	67	66.6
Employment-to-population ratio (%)	50.4	50.5	76.1	74.5	63.3	62.5
Unemployment rate (%)	5.8	6.4	5.5	6.1	5.6	6.2

Source: ILO, Global Employment Trends Model, (2003); see also ILO, Global Employment Trends (2004)

According to ILO (2004, p. 2), "Unemployment rates for women are lower than for men in sub-Saharan Africa at a high level of around 10 per cent and East Asia (at below 5 per

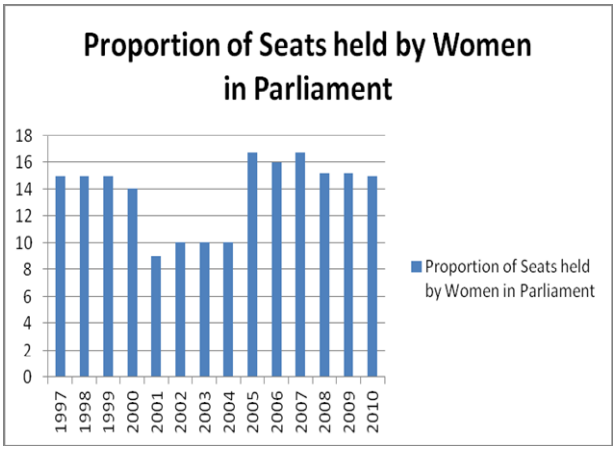
cent)". This clearly shows that women are increasingly participating in the labour force but existing statistics on their numbers at top managerial level indicate otherwise. Table 1 above gives the labour force participation rates for women on a global scale as well as the unemployment rates. The labour force participation of women was relatively low at around 54% for the periods 1993 and 2003 as compared to a rate of about 80% for men (refer to Table 1). However, the unemployment rates for both men and women were relatively low for the same period with that of women slightly higher than for men probably due to global economic downturns. A lot of legislature has been enacted in Zimbabwe over the years to try and correct the gender disparity in the work place and promote the rise of women to decision making positions. In 1980, the Equal Pay Regulations Act was introduced (Zimbabwe Millennium Development Goals (MDG) Report 2010, p. 54) followed by the Legal Age of Majority Act (LAMA) of 1982 which conferred majority status on women since black African women were regarded as perpetual minors. The 1984 Labour Relations Act (Chapter 28:01) prohibited employers from discriminating employees on the grounds of sex while the Public Service Pensions (Amendment Regulations) provided for female workers in the public service to contribute to their pension at the same rate as male contributors (Zimbabwe MGD Report, 2010).The 1990s saw the enactment of the 1992 Gender Affirmative Action Policy, and the 1999 Nziramasanga Commission (Chabaya, Rembe & Wadesango, 2009). The National Gender Policy of 2002 was meant to provide a framework for mainstreaming gender in all sectors of the economy whereas the 2004 National Gender Policy was meant to reinforce the 2002 policy. Other enactments included the General Law Amendment Act (Section 12, Chapter 8.07) which provides for women in Zimbabwe to be legally entitled to take up political and public offices and the SADC Protocol on Gender and Development (Ratified on 22 October 2009) which advocated for gender parity (50:50), among other things, in politics and other decision making bodies. Moreover, the government made the 'Promotion of Gender Equality and Empowerment of Women" the MDG goal number 3. Despite these policies, female labor force participation remained low in Zimbabwe as shown in Figure 2.



Source World Bank Data (2010)

FIGURE 2: *Labour force participation rates: females*

The second target of MDG goal number 3 was to increase the participation of women in decision making in all sectors and at all levels (to 40% for women in senior civil service positions and to 30% for parliament) by 2005 and 50:50 by 2015 (Zimbabwe MDG Report, 2010). In the Public Service Commission, women constituted, 67% as commissioners in 2009, only 20% were cabinet ministers and 26% permanent secretaries in 2010. In government, 26% of principal directors are women, as are 33% of directors and 28% of deputy directors. Women constitute 30% of ambassadors and heads of mission, 29% of Supreme and High Court judges, 41% of magistrates. The Defence Forces have no women at the highest levels and very few at lower levels. In the police force 25% of deputy commissioners are women (Zimbabwe MDG Report, 2010). Despite all these efforts by the government, women continuously remain under represented at decision making positions. Figure 3 shows that the percentage of seats held by women in national parliament have been fluctuating between the years 1997 to 2010 probably due to mixed response of the populace to government policies. The period 2001 to 2004 saw the rate falling which might have led to the 2004 National Gender Policy. However, after the introduction of the policy, the rates increased to 16.7 for the period 2005-2007 but fell again to 15.2 for the years 2008-2009 and then settled at 15 for 2010.



Source: ZWE Country Meta Data

FIGURE 3: *Proportion of seats held by women in national parliament (%)*

This study aims to investigate and analyse the factors impinging on Zimbabwean women's career progression.

II. FACTORS AFFECTING MARRIED WOMEN CAREER PROGRESSION

Economists postulate that the reproductive behaviour of parents in large part is a response to the underlying preferences of parents for children. The parents are said to derive satisfaction or utility from their children albeit the costs involved. Given the state of the birth control technology and the various classes of uncertainty associated with contraception, infant mortality, health and fecundity of the parents and the income and wage rates parents expect to realise over their lifecycles, these preferences are constrained by the parent's resources and the associated alternative economic opportunities in using their resources. In turn these resources imply sacrifices, measured in terms of opportunity costs that the parents must be prepared to make in acquiring the future satisfactions and productive services they expect to realise from children (Becker 1981). According to Becker (1975), in the theory of allocation of human time, human time is included in allocative decisions with respect to both market and non-market activities. In making their decisions on labour

force participation (market activities) married women have to strike a balance on time allocation to non-market activities (housework and bearing children) as well as leisure. In the human capital theory by Becker, marriage is said to work in favour of men than women. To men, it is seen as a sign of stability and responsibility implying that married men are more likely to progress faster in their careers than single men. On the other hand, married women with children are perceived to be more committed to their families than their jobs hence less likely to progress in their careers. The level of schooling is also regarded as a determinant of female career progression in the human capital theory implying that more educated women are more likely to progress in their careers as compared to their less educated counterparts. According to Becker (1985), the opportunity cost of schooling, that is, lost wages, increases as one gets educated which means that educated women are less likely to leave employment to take care of their families. The rational approach sees organisations as the ones which hold power to determine career progression through their influence on their employees' number of promotions and level of earnings. Hence only those employees, who devote more time to their work, take more responsibility are regarded as a worthy investment which implies that married women with children are less likely to be promoted simply because they are not willing to spend more time away from their families (Valcour & Ladge, 2008).

In empirical studies, family variables like delaying child birth, limiting the size of the family have been noted to be major deterrents to married women career progression (Valcour & Ladge 2008; Benefo & Pillai 2003). Other empirical findings from Chabaya, Rembe and Wadesango (2009) suggest that family attachment, among other factors, impedes the advancement of women into leadership. A study by Thanacoody et al. (2006) discovered that the major finding that emerged from their interviews was the challenge of balancing work and family responsibilities. Clarkberg and Hynes (2005) found that age at first birth and education were found to be typically predictors of women's employment status and also good predictors of women's employment patterns. Valcour and Tolbert (2003) also found that having children was associated with greater career progression within the same organization for men, but reduced career progression within the same organization for women. Forster's (2001) findings suggested that there are still ingrained socio-cultural and structural barriers to the progression of women within the university. Furthermore, Chuma and Ncube (2010) cited gender occupational segregation as one of the reasons why women were not found in significant numbers at the apex of organisations in their study of female bank managers in Zimbabwe. Gronau (1974)'s study concluded that work experience, that is, human capital accumulation, was a major determinant of market earnings and wage rates of women. A study by Abidin, Rachid and Jusoff (2009), attempted to discover the obstacles that keep women from rising above certain level in the organisations in an effort to raise both their individual self-worth and the level of their contribution to economic development and discovered that the prime factors for respondent's career barriers, were structure, task, (the concern of this factor was on the employee's ability to execute tasks); commitment; social and culture.

III. METHODOLOGY

3.1 Model derivation and specification

The model used in this study was derived from Chabaya et al. (2009), Clarkberg and Hynes (2009), Gronau (1974) and Valcour and Ladge (2008), who cited age at first birth, number of children below five, family attachment, geographical mobility and level of education as major determinants of female career progression. The empirical model is specified as follows:

$$CP = f(AFB, NBF, FA, LOE, GM) \quad \text{.....(1)}$$

Where: CP -married women career progression as measured by the number of promotions in career history, AFB- age at first birth, NBF- number of children below five years, FA- family attachment, (1=if willing to accept promotion away from family, 0=otherwise), LOE-level of education as measured by number of years of schooling, GM- inter-organisational mobility as measured by length of stay at current residence,

Equation (1) can be specified as:

$$CP = \beta_0 + \beta_1 \log AFB + \beta_2 NBF + \beta_3 FA + \beta_4 \log LOE + \beta_5 \log GM + \varepsilon \quad \text{.....(2)}$$

Where: *CP, AFB, NBF, FA, LOE,* and G*M* are as defined above and $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ are coefficients of the explanatory variables and ε is the error term

3.2 Data analysis

Career progression was proxied by the number of promotions attained by a married woman in the history of her career. This measure represents count data and hence the study employed Count Data Models. Specifically, the analysis was conducted using the Normal Count Model. However, this model was only used because the Poisson and the Negative Binomial Models were rejected by the Log Likelihood ratio test which tests the hypothesis that all the coefficients are significantly different from zero. Interpretation of results was by the use of incidence rate ratios.

3.3 Data sources and type

The research is based on primary data gathered by the use of questionnaires from female employees in Gweru urban. The sample was drawn from major employers in the Health, Higher Education, Manufacturing, Financial and Public Utilities sector in Gweru Urban, Zimbabwe. The respondents targeted were married or partnered women with at least one birth child. The researcher employed stratified random sampling. From the selected employers, the total number of married women was approximately 190. This is the researcher's approximation since most organizations do not keep information on whether their employees have partners or are married or have at least one birth child. Those statistics they had were of those with marriage certificates. Hence the researcher had to resort to asking the employees about the number of women at the organization with such attributes. According to Krejcie and Morgan (1970), the appropriate sample size would be of 123 respondents.

IV. RESULTS

4.1 Descriptive statistics of explanatory variables

The researcher dispersed 123 questionnaires and only 83 were returned (67% response rate) since some of the respondents

could not complete the questionnaires for various reasons not known by the researcher. The majority of the women gave birth to their first child at an average age of 24. The survey also indicates that 54% of the respondents actually had their first child at an age of 24 and below. From the explanatory variables, only family attachment is binary (either zero or one). All the explanatory variables, except age at first birth, level of education and geographical mobility had relatively low averages hence, it was necessary to normalise variables such as age at first birth (AFB), level of education (LOE) and geographical mobility (GM), which have means of 24, 14 and 8 respectively; by taking their natural logarithm to avoid the effect of outliers. Only 18% of the respondents were willing to accept promotions that took them away from their families indicating strong family attachment for most of the women surveyed. The descriptive statistics of the sample are given in Table 1.

Table 2: Descriptive summary statistics of explanatory variables

Variables definition	Code	Min	Max	Mean	SD
Explanatory Variables					
Age at First Birth	AFB	17	37	24	3.5
Number of Children below Five years	NBF	0	3	0.71	0.6
Family Attachment "are you willing to accept Promotion away from family?" Yes=1, No=0	FA	0	1	0.2	0.41
Inter-organisational Mobility "number of years at current residence"	GM	1	29	8.1	8.6
Level of Education "number of years of schooling"	LOE	11	22	14	2.85
Dependent Variable Number of promotions	CP	0	5	1.4	1.24

4.2 Diagnostic test results

Cross sectional data usually suffer from multicollinearity which refers to a situation where the variables dealt with are subject to two or more relations (Maddala, 1992). This was tested by using the correlation matrix generated in E-Views 4.0. Correlations of above 0.8 are evidence of presence of severe multicollinearity (Gujarati, 2004). The results presented in Table 2 indicate the absence of multicollinearity since most of the correlations between the variables were all below 0.5.

TABLE 3: *Multicollinearity test results*

	CP	**LogAFB**	**NBF**	**FA**	**logLOE**	**LogGM**
CP	1					
logAFB	0.175	1				
NBF	-0.147	0.184	1			
FA	0.117	0.104	0.097	1		
logLOE	0.087	0.123	0.126	0.278	1	
logGM	-0.004	-0.035	-0.36	-0.16	-0.196	1

Source: Author's own calculations from figures generated from E-views 4.0

4.3 Regression results and interpretation

All regression analysis was conducted in E-Views version 4. The models available for count data in E-Views are the Poisson, Negative Binomial, The Normal Count and the Exponential Count with the Poisson being the most commonly used model for count data. Before determining which model to use for the analysis of the data, the researcher tested for overdispersion using the test suggested by Cameron and Trivedi (2005) and Wooldridge (2004) as generated in E-views. Both methods indicated the absence of overdispersion as evidenced by highly insignificant and negative coefficients in both tests. The results are given in Table 3.

TABLE 4: *Over-dispersion test results*

Variable	**Coefficient**	**Std Error**	**t-statistic**	**Probability**
CPF^2*	-0.077371	0.077459	-0.98864	0.3208
CPF**	-0.040287	0.102283	-0.393875	0.6947

* Cameron and Trivedi (2005) Test, ** Wooldridge (2004) Test

Where: CPF is the forecasted values of career progression generated from E-Views 4.0

Since the above results indicated the absence of over-dispersion in the residuals, the Poisson restriction was accepted. The data was analysed using the Poisson model but the results from the Log Likelihood test indicated that all of the coefficients were not significantly different from zero, implying the model was insignificant. Moreover, in the absence of over-dispersion, the results from Negative Binomial Model are similar to those from the Poisson Model implying that the model could not be used for this study as well. The model was then tested using the Normal Count Model. Findings from this study were then based on this model. Therefore the findings from this study are presented in Table 4.

TABLE 5: *Normal count regression results*

Variable	Coefficient	Std Error	Z-statistic	Probability
C	-3.9943	1.9331	-2.066	0.0388
LogAFB	1.275	0.4334	2.942	0.0033
NBF	-0.406	0.1996	-2.0342	0.0419
FA	0.2349	0.2496	0.9412	0.3466
LogGM	0.0386	0.0825	-0.4682	0.6396
LogLOE	0.217	0.4558	0.476	0.6341

Source: author's own calculations from data generated from E-views 4.0

Log Likelihood -133.3896 Prob (LR Stat) 0.034711 LR Statistic (5df) 12.00560 LR index (Pseudo R^2)0.043064

From the LR tests, the null hypothesis that all parameters equal zero is rejected since the Prob (LR stat) is less than 0.05. Therefore it can be concluded that at least one of the coefficients differs significantly from zero. The signs of the estimated coefficients are consistent with theoretical expectations except for family attachment. Only age at first birth and number of children below five were significant while family attachment, geographical mobility and level of education were insignificant. Therefore, according to the model, the determinants of female career progression for Zimbabwe are age at first birth and number of children below five. The coefficients from the model were interpreted using the incidence rate ratios (IRR) calculated by exponentiating the regression coefficients. The IRR are given in Table 5.

TABLE 6*: Incidence rate ratios*

Variable	AFB1	NBF	FA	GM1	LOE1
IRR	3.5787	0.6663	1.2648	0.9621	1.2423

Source: Researchers own calculations based on regression coefficients

DISCUSSION

Age at first birth has the correct sign and is significant as evidenced by a Z-statistic of 2.942 which is greater than 2, the rule of thumb. From the results, age at first birth is positively related to married women career progression, that is, women who delay child bearing are more likely to progress in their careers as compared to early child bearers. Moreover, since age at first birth is in logarithms, the coefficient measures the elasticity of career progression with respect to age at first birth. Since the coefficient is positive and relatively large, career progression can be said to be very responsive to age at first birth. Age at first birth has an IRR of 3.5787 implying that if a married woman were to delay child bearing by one year, her rate ratio for career progression would be expected to increase by a factor 3.5787 holding other variables constant. These findings support existing theory and empirical evidence on the relationship between age at first birth and career progression, for example, Valcour and Ladge, (2008). The significance of the number of children below five indicates that the presence of children below five years affects married women career progression. The coefficient of the number of children is negative implying that women with more children below the age of five are less likely to progress career wise. This is in line with findings from Benefo and Pillai (2003). The IRR of number of children below five is 0.6663 implying that if a married woman's children who are below five were to increase by one, her rate ratio for career progression would be expected to decrease by a factor 0.6663, while holding other variables in the model constant. Children below the age of five require much attention as compared to those who are older. This is in line with the theory of allocation of human time which postulates that a married woman has to divide her time among market activities (labour force participation), non-market activities (shopping and household production) and leisure. Hence, as the number of children below five increases, more time is spent in household production relative to market activities impacting negatively to a married woman's career progression (Becker, 1981). However, family attachment was positive, contrary to *apriori* expectations, and insignificant in the model. This implied that for the sample selected, family attachment did not explain married women career progression. This is in contrast to most empirical evidence which found that family attachment impedes career advancement (Chabaya *et al*, 2009), however, a lot of studies have shown that the existence of child care services within and outside the family has made it easy for women to combine both work and family responsibilities (Benefo & Pillai, 2003) thus making it easy for them to accept promotions that takes them away from their families. Inter-organisational mobility was found to be positive (contrary to *apriori* expectations) and insignificant which is inconsistent with most empirical studies, for instance, that of Clarkberg and Hynes (2005) who found out that throughout early parenthood, women exhibited significant movement into and out of the labour force hence making career progression difficult. In contrast to both existing theories (Human capital theory) and empirical evidence (Clarkberg & Hynes, 2005; Gronau, 1974), level of education was found to be insignificant in explaining married women career progression. This might be due to the complexity of the women career path and also the effect that the presence of children and a spouse will have on career progression even of the most learned married woman. However, the variable had an expected positive *apriori* sign.

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