

**A Post-War<sup>1</sup> Economy**  
**Women Entering the Urban Labour Market in**  
**Eritrea**

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Paper presented at the IUSSP Seminar on Women in the Labour market in Changing Economies: Demographic Issues. Rome, Italy, 22 – 24 September 1999.

## **Abstract**

The impact on the Eritrean demography and economy of thirty years of independence war has brought about changes in the role of women. Their participation in the urban economy contributes to local production and income by filling the gaps left by men who died in the war or who have left the country. This paper establishes three explanations why Eritrean women are entering the urban labour markets: One reason is that they are allowed to, as family ties and control of women is weakened due to absent men and increasing divorce rates. The second is that they have to, since there is a shortage of male breadwinners. The third reason is that they want to, as growing education levels increase their earning potential. To a large extent, the first two reasons can be contributed to the demographic changes that have followed the war. The case of Eritrea represents a scenario that unfortunately are seen in several countries today, namely gross distortions of the age and sex structure due to severe conflicts such as in Cambodia and East Timor.

Despite the growing importance of women for the formal economy, the analysis presented finds that jobs and self-employment opportunities available to women are still clustered in low-productivity and/or low-status industries. This can to a large extent be contributed to the large group of women without education, as it is particularly these women who are disadvantaged in the labour market and are facing wage discrimination. Once they have got a job, women with education above basic level seem to have the same opportunities as men.

To cope with the growing number of female-headed households, Eritrea needs to increase the earning potential of women. This paper indicates that providing women with education at secondary or tertiary level is one way to go.

## **Introduction**

Situated between the Arab and the African world on the western shore of the Red Sea, Eritrea is a small country with around 2.5 million inhabitants<sup>2</sup>, of which some 70 per cent are relying on subsistence agriculture (National Statistics Office 1997, 2). It is also one of the world's poorest countries with national income per capita estimated at around US\$ 200. The population is culturally, linguistically and religiously diverse with nine major ethnic groups, of which the mainly Christian, highland Tigrinya people are the dominant.

Eritrea was an Italian colony from 1890 until the Second World War when it was temporarily taken over by Britain and finally federated with Ethiopia by a UN resolution in 1952. The incorporation of Eritrea into the Ethiopian Empire in 1962 followed the Eritrean armed struggle for independence that started in 1961 and lasted until 1991.

During the colonial period Eritrean ports were becoming important as transit locations for Ethiopian imports and exports, yielding incomes and employment opportunities. In the 1920s and 1930s, an inflow of Italian manpower and capital as well as preparations for the war against Ethiopia turned Eritrea into a regional commercial and industrial centre (Negash 1997). After the Second World War, the Eritrean economy experienced a recession in the absence of the subsidising Italian colonialists and subsequent Ethiopian neglect. The 30 years of liberation war damaged most remaining economic and physical infrastructure. Economic growth after liberation has been at some 7 per cent per year, based heavily on foreign aid and remittances as well as the promotion of private investment. The outbreak of the new war between Ethiopia and Eritrea in May 1998 has regrettably reversed the ongoing economic development.

## **War and demographic changes**

The population structure in Eritrea bears the sign of war and migration with high fertility coupled with a lack of adults. There is a particular lack of adult men in the country, with 82 and 90 men per 100 women in urban and rural areas respectively. In urban areas, there are almost twice as many women as there are men in the age group from 30 to 40 years (National Statistics Office 1997, 10). While this can partly be explained by rural-urban migration of women, the surplus of women both in rural and urban areas indicate that war casualties, refugees and labour migration have played an important role in shaping the population.

Some 10 per cent of the urban population are refugees who have returned home since 1991. However, one million Eritreans are still believed to live abroad, and many send money home. The high level of remittances income sent from abroad has opened up for labour migration into Eritrea of Ethiopians, who constitute some 10 per cent of the urban population<sup>3</sup>.

There are three reasons why it is likely that the war has had, at least some, impact on the role of women in the patriarchal Eritrean society. One is that the traditionally strict division of labour between men and women was challenged when women started entering the liberation army, and finally counted for maybe as much as 30 per cent of the forces by the end of the war. Today, 5 per cent of adult women and 10 per cent of men in urban areas are ex-

fighters<sup>4</sup>. Secondly, the power of religion has been challenged by the new regime, and the new legislation provides equal rights to women and men, at least in theory (Halden 1997). Thirdly the lack of men has left much of the traditionally male responsibility of providing for the families to women<sup>5</sup>.

This is illustrated by the pattern of marital status (figure 1), indicating that nearly half of all urban households are female headed. The largest group is the widows, constituting some 35 per cent of urban female-headed households. Since many men have died from “non-natural” causes, widows are not necessarily old. As early as in their 40s, almost 20 per cent of women are widowed, and most widows have children living in the household.

The second largest group (30 per cent) of female heads is married women with men absent on labour migration, followed by divorced women (25 per cent). Again, most of these women have children. Women who have not (yet) married constitute a small group. They are commonly young, and few of them have children.

Two demographic features distinguish female-headed households from male-headed ones: They are smaller, and they more commonly extend the nuclear core. As a result, the dependency ratio for female-headed households is actually somewhat lower than for male-headed households, at 80 and 85 respectively. The mean household size of 3.3 compared to 5.1 for male-headed, is because female-headed households on average have 1 adult member less, and also almost 1 child less. For female heads, Arneberg (1999) shows that an extended family compensates for the higher dependency burden that arises when a husband leaves or dies, and that failing to include more adult members in the household is an important determinant of poverty in urban Eritrea. Hence 29 per cent of female-headed households are extended, versus 18 percent for male-headed.

### **Women in the urban labour markets of Eritrea**

The urban economy in Eritrea is characterized by a low activity level and a correspondingly heavy reliance on transfer income (Arneberg and Pedersen 1999)<sup>6</sup>. The adult labour force participation rate is only 49 per cent; 69 for men and 34 for women. Combined with an unemployment rate at 20 per cent and a skewed population composition, this gives a high dependency burden with 3 dependants (defined as not employed) for every employed person. As much as 40 per cent of the households have only seasonally employed members or no labour market attachment at all. One out of three households have income from gifts and transfers as their main source of livelihood. Such income is mainly coming from relatives residing abroad or elsewhere in Eritrea, as public social assistance is practically non-existent.

The low local activity level and lack of economical self-reliance is a matter of concern for future economic growth and poverty reduction. There are reasons to believe that the foreign labour market will be less accessible in the future, since the main factors that brought Eritreans abroad earlier were their refugee status, and the now declining demand for unskilled labour in the Gulf. As a consequence, domestic production will inevitably have to play a more important role in the provision of income for Eritrean families in the future. Secondly, large cohorts of children will soon enter the labour force. With a

continuing low activity level, they are in danger of meeting a labour market too small to absorb them.

Analysis that contributes to identifying the factors that increase female labour force participation is policy relevant for two reasons. One is that, in the absence of able-bodied men, women constitute an important reservoir of labour that can be activated in order to increase local production. (Although the activity rate for men is twice that of women, women already constitute as much as 40 per cent of the labour force due to the skewed sex distribution). In addition, the high and probably increasing occurrence of female-headed households requires increased female labour force participation to avoid poverty and transfer dependence for a growing share of the population.

With this motivation, the remainder of this paper will focus on answering the question of what determines women's labour force participation. In addition, we will try to assess whether women are being discriminated in the labour market. Thirdly, we want to identify how women's earnings can be raised in order for the growing number of female household heads to become more self-reliant.

The relationship between economic activity and age shows some similarities for men and women (figure 1). Most teenagers go to school, and few enter the workforce before 20. The activity rate peaks from early 30s to mid-40s and declines thereafter. However, while most men are economically active when they reach 30, the activity rate for women hardly gets above 50 per cent. The rate declines sharply for women at around 45 years compared to men who do not leave the labour force in large numbers before they get close to 60 years.

While men report health problems as the main reason for not being economically active, inactive women report that they do not wish to be employed and that they are doing housework. Hence, while the observed pattern for men is caused by drop-out from the labour market due to old age and subsequent physical problems, the observed pattern for women is most likely a cohort effect. Although there is a lack of historical data on female labour force participation in Eritrea, the fact that most women above 45 years are house-wives indicates that women started entering the urban labour market not long ago.

Of the possible reasons why women have entered the labour market, we will explore the following explanations: 1) Poverty driven: Women have no other option than to provide for themselves since husbands have become a scarcity. 2) Autonomy driven: Women have more autonomy than before, and can choose to work and earn their own income if they wish. 3) Incentive driven: Young women have more education than older women have (figure 1). The resulting higher earning potential increases their willingness to seek employment.

There seems to be a case for all three explanations, as illustrated by the example of divorced women who have very high labour force participation rates (table 1). They are facing social exclusion in the sense that they receive little financial support from relatives (Arneberg 1999), hence there is a case for the explanation that they are driven to the labour market by poverty. However, exclusion and lack of support also make them less dependent on

relatives who might refuse them to take a job, which makes a case for the autonomy explanation. To identify the various effects of demographic and other factors on economic activity, we evidently need a multivariate model. Table 2 gives the results of an econometric model which is aimed at revealing the factors that contribute to increased job opportunities and willingness to work, as well as to increased returns to labour.

The model takes as its point of departure that the employment outcome for an individual is a result of individual choice constrained by opportunities. The individual choice is based on the person's preferences: If the utility of being employed is greater than the utility of not being employed, the individual will seek employment. Translated into economic terms this is the same as to say that a person will seek employment if the income and non-pecuniary satisfaction from a job is greater than the related efforts and costs, or equivalently, the individual's wage is greater than her reservation wage.

This simple discrete choice model can be generalized to include the utility from different types of jobs, in the literature commonly adapted to distinguish between the labour supply to the formal and the informal sector. The model used below is a simplified version of an application on data from urban Eritrea, where Arneberg and Dagsvik (1999) extend the standard framework for modeling labour supply to account for unobserved non-pecuniary aspects of the jobs as well as restrictions facing the individual in the labour market. On the observational level, the model classifies the labour market in two sectors, namely the wage sector and the self-employment sector. The model assumes that the individual will be employed in the sector that yields the highest income, given that this income is greater than the individual's reservation wage. The model allows for the fact that different people face different unobserved opportunities in the job market depending on their qualifications, but we will not make any effort to identify such effects in the present analysis.

The variables determining the employment outcome of an individual are therefore i) variables affecting the returns to labour in different economic activities, ii) variables affecting the number of job opportunities faced by the individual, and iii) variables affecting the individual's reservation wage. Our main focus here is on the effect of demographic factors on the reservation wage.

The autonomy and responsibilities of women will to a large extent be determined by the woman's status within the household and larger family. The autonomy of women to make their own choice with respect to employment is assumed to depend on her closeness to relatives, and particularly a husband and family-in-law. We measure this by her marital status and the absence or presence of a husband. Further, young children who require much care will reduce labour force participation by raising the woman's reservation wage, or equivalently by imposing a cost on being employed. As self-employment activities generally are assumed to be easier to combine with domestic tasks and lack of autonomy than wage-sector jobs, we allow the effect of demographic characteristics to vary between sectors.

While households and individuals are our units of analysis, the economic units commonly transcend these borders, as illustrated by the observed high occurrence of income transfers between relatives. Since the additional utility

from an extra unit of money is decreasing as income rises, a woman will be less willing to take up employment if her husband provides the family with income whether he lives in the same household or is absent on labour migration. The model therefore includes non-labour income as explanatory variable to assess the effect of access to alternative income sources on female labour supply. Non-labour income is composed by transfer income in cash and kind from households inside Eritrea and abroad, labour income from other household members, as well as assistance from the government and other organizations, and capital income other than imputed housing rent.

Variables that are assumed to affect the wage rate and the woman's job opportunities in the wage sector are education, experience and the activity level in the labour market. The latter is represented by the regional unemployment rate. Education is measured in years of formal schooling. To avoid endogeneity, work experience is replaced by age, which is a measure of "exposure time" to the labour market. However, age is correlated with health and work ability, and the effect of age is therefore not interpreted below. A dummy variable on war experience as liberation fighter is included. The reason is that ex-fighters, who commonly work for the government, receive wages above that of persons with equal level of formal education. This might be justified by the practical experience and training they received during the war or after, but the practice is also a political decision.

Equivalently, variables that are assumed to affect returns to self-employment activities are education and experience, as well as access to infrastructure and capital. The latter is specified as an additive index composed by owning a house, as well as having access to land or a garden plot, piped water and electricity.

The model is specified separately for men and women. The population is limited to 23 to 65 years, as the model does not explain individual decisions to take education or to retire from employment. As depicted in table 2, most of the estimated effects from the exogenous variables on the probability of being employed are established at a high level of precision. However, the model explains a rather small share of the observed variation in the data, especially for men, most likely because of the lack of data on health conditions. The lack of health information is particularly regrettable in this context since disabilities are common in Eritrea.

Education has a strong, positive effect on the probability of being employed in the wage sector, whereas the effect on self-employment is much smaller. For men, education above basic level has insignificant or and even negative effect on the probability of being self-employed. This strengthens the general impression that people with higher education aspire for public administration jobs, and that self-employment is considered as a last resort (except for a small group of entrepreneurial people). The estimated wage and profit equations (table 4) confirms that there are decreasing returns to education above incomplete basic in the self-employment sector for men.

For women, the returns to education positive in both self-employment activities and in the wage sector, which explains much of the positive effect of education on the probability of being employed in both sectors. However positive, education below secondary level has only a small effect on women's

employment. Hence the most influential effect from education on women's employment goes from higher education to wage sector employment. This is a feature commonly found in Arab countries (Awad and Arneberg 1998).

Although access to land and infrastructure has a significant impact on the self-employment propensity of women, the returns to capital is around three times higher for self-employed men, and capital is therefore much more influential on the self-employment propensity for the latter. Men's wages and employment are also more vulnerable to the regional activity level than that of women, despite that the unemployment rate is higher for women than for men. This indicates that demand-side factors, namely the lack of jobs available, are less important for the labour market attachment of women than it is for men. The high, negative effect of non-labour income on the employment of women, strengthens the argument that women with no alternative income sources have to take any job, while those who receive assistance or has a husband to provide for them can afford to be more picky.

Women who are former liberation fighters have a higher probability of being employed in the wage sector compared to other women. As shown below, fighters are rewarded by higher wages, but we can assume that they have also been given priority for public sector jobs. There is also a positive employment effect for male ex-fighters, although much smaller, indicating that female ex-fighters are facing less discrimination or are more autonomous than women usually are.

Similarly, being widowed, or even more so, divorced, has a high effect on women's employment probability in both sectors, while being married has a negative effect. Table 3 gives some calculated effects on the mean probability of being employed in each sector, from a change in education level or marital status. Hence, the death of a husband causes the probability of both wage- and self-employment to increase by 0.08 (when the probability is measured on a scale from 0 to 1). Divorcing raises the wage employment probability by 0.14 and the self-employment probability by 0.11, which is significant taken into account that the labour force participation rate for married women is only 0.20<sup>7</sup>. When comparing the effect of marital status to that of education, we see that divorcing has an effect on wage-employment probability almost equivalent to that of increasing the education level from basic to secondary school.

The absence of a husband does not increase the wife's probability of wage-sector employment, but it has some impact on self-employment by raising the mean probability from 0.16 to 0.20. The higher labour force participation rate for women with absent spouses compared to women who lives with the husband (table 1) is therefore likely just as much a result of lower non-labour income as of higher autonomy.

Working as self-employed in general seems to be more combinable with lack of autonomy and more family responsibility than wage sector jobs are: Ties to a family-in-law, which married women and widows have, are associated with higher propensity to be self-employed. That also goes for the around 25 percent of urban women who are Moslems, and for women who have small children. Child-care responsibilities are associated with slightly lower employment probability in both sectors. Whereas having one additional child

below 5 years lowers the wage-sector probability by 0.03, the effect on self-employment probability is somewhat lower at 0.02 (table 3).

## **Conclusion**

We have established that there is a case for all three hypotheses explaining why women are entering the urban labour markets in Eritrea: They are driven by poverty or lack of alternative income sources, by a higher degree of autonomy, and by increased earning potentials.

The employment pattern of men and women shows that Eritrea still has a partly segmented labour market (table 5). While high-skill jobs in government administration, finance, and health and education services are equally common among women and men (around 20 per cent), gender segmentation is more common at the lower end of the job ladder. Construction and transportation is mostly men's work, whereas 63 per cent of women work in typically low-skill and low-paid sectors such as trade, hotels and restaurants, domestic servants and self-employed small scale manufacturing.

Hence the more important role of women in the formal economy, does not prevent women from being recruited to work in low-paid industries. Women also earn less than men within the same industry. However, women who have received education above basic level seem to be treated equal to men once they have entered the labour market. Systematic gender bias in wages and career mobility is mainly found among people with no or little formal education (table 6). Hence, the future for Eritrean women in the labour market looks promising, taking into account the rapidly increasing education level among girls.

Besides educated women, women who are former liberation fighters constitute a group who has been able to break through the much of the traditional barriers in the labour market. Female fighters have the same earnings as male fighters, and fighter status alone gives women almost 80 per cent wage increase – twice the effect for men. Once they have entered the labour market, female fighters also seem to have the same promotion opportunities as male fighters.

The new demographic setting in Eritrea with husbands who are dead or away on labour migration, increasing number of divorces, women entering the military arena as well as improved access to education for girls, are all factors that contribute to increasing the labour market participation for women. The lack of men has been compensated by higher utilization of women's labour resources, making women more important for the overall economic performance. However, women are clustered in low-status jobs with low returns. This poses a new challenge to policy makers: how to prevent the growing number of female-headed households to fall into poverty? This analysis argues that education is a way to go, but that in order to make any substantial impact, basic education is not enough.

## References

- Arneberg, M. and Pedersen, J. (1999): Urban households and urban economy. The Urban Eritrean Income and Expenditure Survey 1996/97, Analytical Report. Statistics and Evaluation Office, Asmara. Forthcoming autumn 1999.
- Arneberg, M. (1999): Feminization of Urban Eritrean Households: Implications for poverty reduction policy. To be presented at the Third African Population Conference, South Africa, December 1999.
- Awad, T. and Arneberg, M. (1998): Work and working conditions. In Hanssen-Bauer, J. et al (eds.): Jordanian society. Living conditions in the Hashemite Kingdom of Jordan. Fafo report 253, Fafo 1998.
- Halden, S. (1997): Moslem and Christian in Eritrea. Thesis at the University of Oslo (in Norwegian).
- National Statistics Office (1997): Eritrea Demographic and Health Survey, 1995. National Statistics Office, Asmara, and Macro International Inc. Calverton Maryland 1997.
- Negash, T. (1997): Eritrea and Ethiopia. The Federal Experience. Nordiska Afrikainstitutet, Uppsala 1997.
- Tronvoll, K. (1998): Mai Weini, A Highland Village in Eritrea. Red Sea Press, Lawrenceville, New Jersey.

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<sup>1</sup> The title was determined before Eritrea got engaged in another war with Ethiopia in May 1998, and should maybe more correctly be changed to “Inter-War”. However, hoping that optimism might bring peace, I chose to keep the original title.

<sup>2</sup> Due to delays in conducting Eritrea’s first census, there is no official population figure yet available. Different sources use estimates from below 2.5 up to 4 millions, of which the latter must be termed greatly inflated.

<sup>3</sup> The figures relates to the period before the latest war. At present, most Ethiopians have (temporarily) left Eritrea.

<sup>4</sup> The figures relates to the period before the latest war. At present, many of them are probably back in the army and hence no longer “ex”.

<sup>5</sup> One might in fact argue that the demographic consequences of the war has had much more important impact on the role of women than the “attitudinal” consequences related to female fighters and change of regime. Tronvoll (1998) argues that, in rural areas, there was a strict division between civil society and EPLF. Women who were recruited to the liberation army were not accepted as ‘normal’ women, i.e. they could not change the gender model of being a woman. Although female fighters might have been more accepted in urban areas, and hence might have contributed to change women’s roles somewhat, it is reasonable to assume that the lack of men has been more important in this respect.

<sup>6</sup> The economic analysis is based on data from the first Eritrean Household Income and Expenditure Survey (EHIES) conducted in 5000 households in the 12 major urban areas of Eritrea during the period from July 1996 to October 1997. The population inhabiting the 12 towns covered in the EHIES make up approximately 495 thousand individuals or 115 thousand households, and covers about 57 percent of the population which for the census is classified as “urban” (based on a very broad definition of urbanity). The survey was conducted by Eritrean National Statistics and Evaluation Office in Asmara in co-operation with Fafo Institute of Applied Social Science in Oslo. The survey was mainly financed by the Norwegian government.

<sup>7</sup> Of course, one can argue that the relationship is at least partly reverse, i.e. that women who are economically active have a higher propensity to divorce. This would turn our argument of demographic effects on the economy into economic effects on demography. However, the higher employment propensity of widowed women indicate that demography came first this time, unless husbands are so badly affected by wives starting to work outside the home that they die from it.