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The women ‘work-fertility’ link in Africa: a re-assessment of recent evidence

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Background

- Little research in Africa on women's employment and fertility since the 1970s and 1980s, because:

(1) Data on labour force participation or women's work are of notoriously poor quality and of limited comparability across countries and over time.

(2) Results of earlier research yielded ambiguous results

Aims of Study

- To re-assess the work-fertility relationship at the macro and micro level using a longer time series of data than was available to researchers in earlier decades.
- To re-assess this relationship at 3 levels of aggregation:
 - **National**
 - **Regional**
 - **Micro-level (future work).**

Research Questions

The study aims to address three main research questions:

- In countries where employment opportunities for women were relatively favourable in early 90s, is it possible to discern any association with subsequent trends in reproductive indicators?
- If **YES**, are the effects of women's employment in the modern sector different by urban or rural place of residence?
- Are these effects still significant after controlling for the level of socio-economic development, typology of family arrangement, proportion of agricultural sector etc..?

Review of Data on Women's Employment

- Most of the data available originates from the ILO databases (either LABORSTA or KILM)
 - sourced from individual national statistics based on a variety of sources, primarily Labour Force Surveys but also other household surveys, censuses and other national estimates.
- Due to the variety of sources, the ILO advise caution when comparing these data across countries or over time.
- The Key Indicators of the Labour Market (KILM) database address this issue of comparability but are available for few African countries
- LSMS data available only for 5 countries (IC, G, M, SA, Tanz, lately Kenya).
- CWIQ survey by the World Bank, only in few African countries and very little on reproduction

DHS data on employment

- Review of data on women's work collected in each DHS round of data collection:
 - The first round of DHS collected data on work before marriage, work since marriage and current work but used a restricted definition of work.
 - In Phase II of the DHS, a specific module to collect data on women's work was implemented using an extended definition of women's work.
- Compared questionnaires for the 2nd , 3rd , 4th , and 5th rounds and derived a comparable employment definition for more than 2 or 3 phases.

DHS data on employment, count

- Variables representing employment in different sectors were selected based on comparability across time and being present in at least 3 rounds of data collection:
 - % currently working
 - % working away from home
 - % working for someone else
 - % working for cash or cash and in-kind
 - % working in professional/ technical/ managerial or clerical job
 - % working in non-agricultural job.

Trends in Women's Employment

- Excluding data from the 1980's, in most countries the majority of women aged 15-49 engage in some form of work (exceptions, Namibia, Niger, Senegal, Zimbabwe).
- Taking data from the most recent survey, the percent of all women working for cash (or cash and kind) ranges from 67% in Benin and Ghana to less than 25% in Malawi, Rwanda, and Burkina Faso with a median value of 36%.
- The percent working 'away from home' tends to be similar to the percent working for cash.
- The percent of women who were employed by a non-relative is much smaller than the other employment indicators, being less than 10% in 14 countries. However, large urban-rural differences are apparent.

Trends in Women's Employment, count.

- The prevalence of women's work in professional, managerial and clerical occupations is below 5 per cent in most countries with except of the urban area of Kenya and Namibia with around 10 per cent of the population engaged in these modern sectors.
- The overall impression is that little change in women's work has occurred in the past 10-15 years.
 - The percent of women reporting any form of work has changed by less than 10% in seven countries, it has risen in three, and fallen in two countries. In the remaining six countries trends are erratic.
 - Examination of the more specific indicators reveals a similar absence of general trend.

Figure: Distribution of percentage of women working in non-agricultural sector in 1990s and 2000s (17 countries).

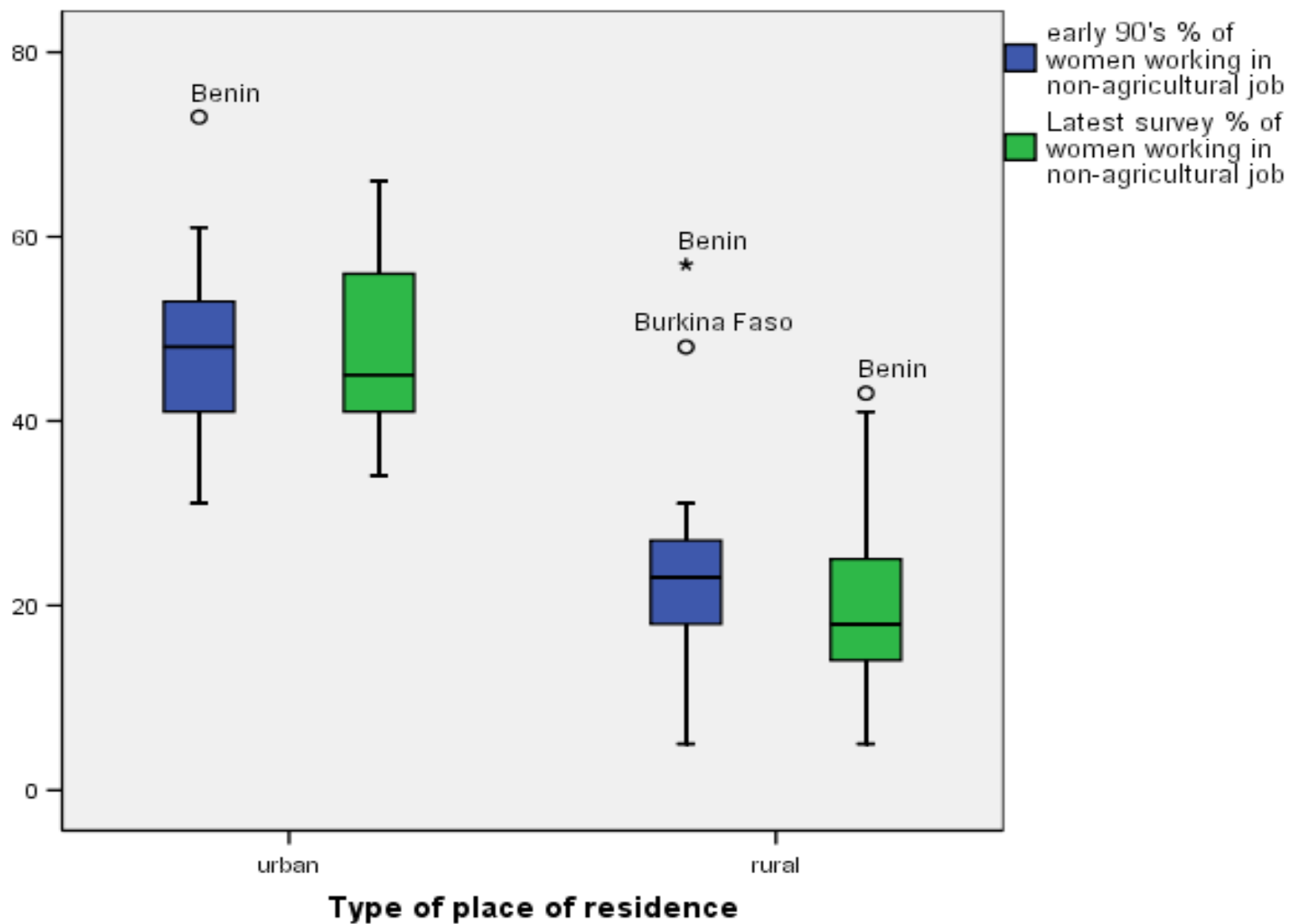
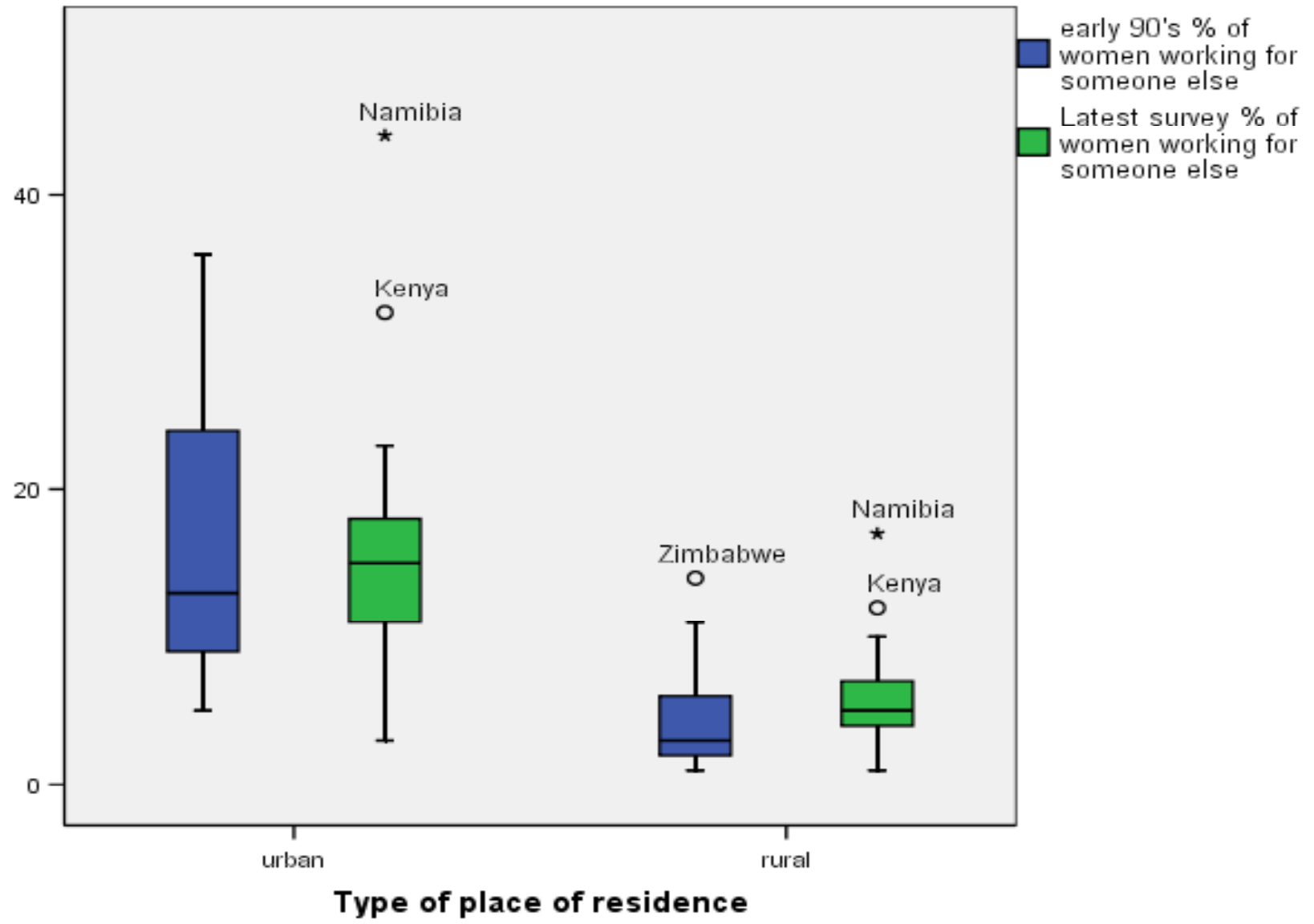


Figure: Distribution of percentage of women working for someone else 1990s and 2000s (17 countries).



Methodology

- Select 17 countries with 3+ DHS
- Correlate employment data in early 90s with subsequent changes in a number of fertility related behaviours.
 1. Repeat analysis for urban and rural area.
 2. Repeat this phase at regional level (n=88 regions, excluding Namibia & Nigeria)

Study Variables

<i>SOCIO-ECONOMIC INDICATORS</i>	<i>FERTILITY – REPRODUCTIVE BEHAVIOUR INDICATORS</i>
<ul style="list-style-type: none">• % of women working in non agricultural sector• % of women' working for someone else or self employed (not working for a family member)• % of women that work away from home• % of women who work for cash• % of women with secondary or higher education	<ul style="list-style-type: none">• Age at first birth (AFB)• Age at first marriage (AFM)• % of women using a modern method of contraception (CPR)• Desired family size (DFS)• % of women in reproductive age that want no more children (LC) <p>Change variables</p> <ul style="list-style-type: none">• Absolute change in AFB, AFM, CPR, DFS, LC from early 1990s to early 2000s• Annual rate of absolute change in AFB, AFM, CPR

Results: *National level*

- At national level the analysis of the 17 selected countries found no consistently strong significant relationship between any of the four employment variables (proxying for women's engagement in the modern sector) and changes over time in the fertility related indicators.
- Surprisingly, the only significant correlations were negative:
 - 'working away' from home (both nationally and in rural areas) was found to be negatively associated with a change in CPR
 - percentage of women working in 'prof/tech/managerial or clerical job' was found to be negatively associated with age at first marriage.

Results, : *Regional level*

	Away	Someone else	Non-Agriculture	Prpf/Tech/manag/clerical
CPR abs change		0.325**	-0.064	0.221*
CPR annual change	-0.345**	0.331**	-0.032	0.243**
AFB abs change	0.07	0.318**	0.017	0.312**
AFB annual	0.08	0.364**	0.06	0.363**
AFM abs change	0	0.125	-0.024	0.161
AFM annual change	0.01	0.172	0.011	0.215*
Desired - change	-0.045	0.096	0.156	0.147
Want no more (change)	-0.048	-0.013	-0.185	-0.022

Results, : *Regional level*

- **+ sign ass.:** proportion of women 'working for someone else' or 'working in a professional job' in early 1990s and changes in contraceptive prevalence (percentage using modern methods) and age at first birth.
- → regions where women had a favourable work opportunity in the modern sector during the 1990s were those regions that experienced a larger increase in use of contraception and delayed the age at first birth during the subsequent decade.
- **- corr** : between CPR and 'working away from home' persists even at the regional level.
- → explained by the fact that this variable is not actually measuring working in the 'modern' or professional formal sector occupations as they may also include activities such as petty trading, selling water in traffic etc.

Figure : Scatter plot of percentage of women working for someone else and change in age at first birth between the first round of DHS in early 90s and the latest round.

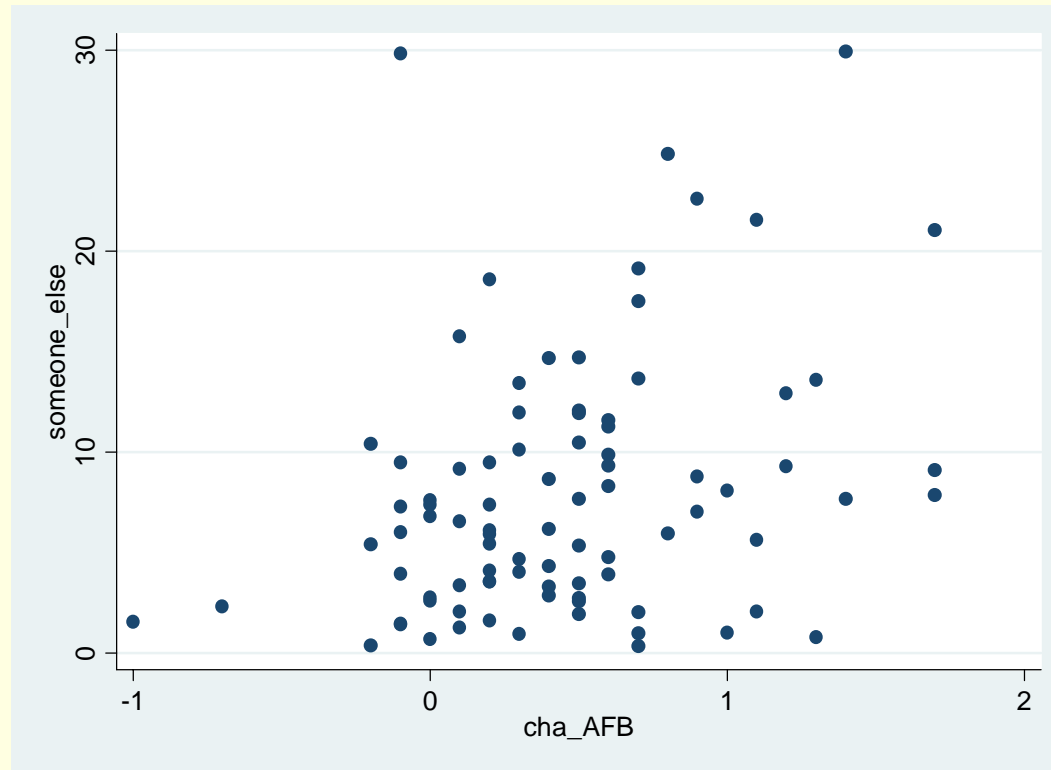
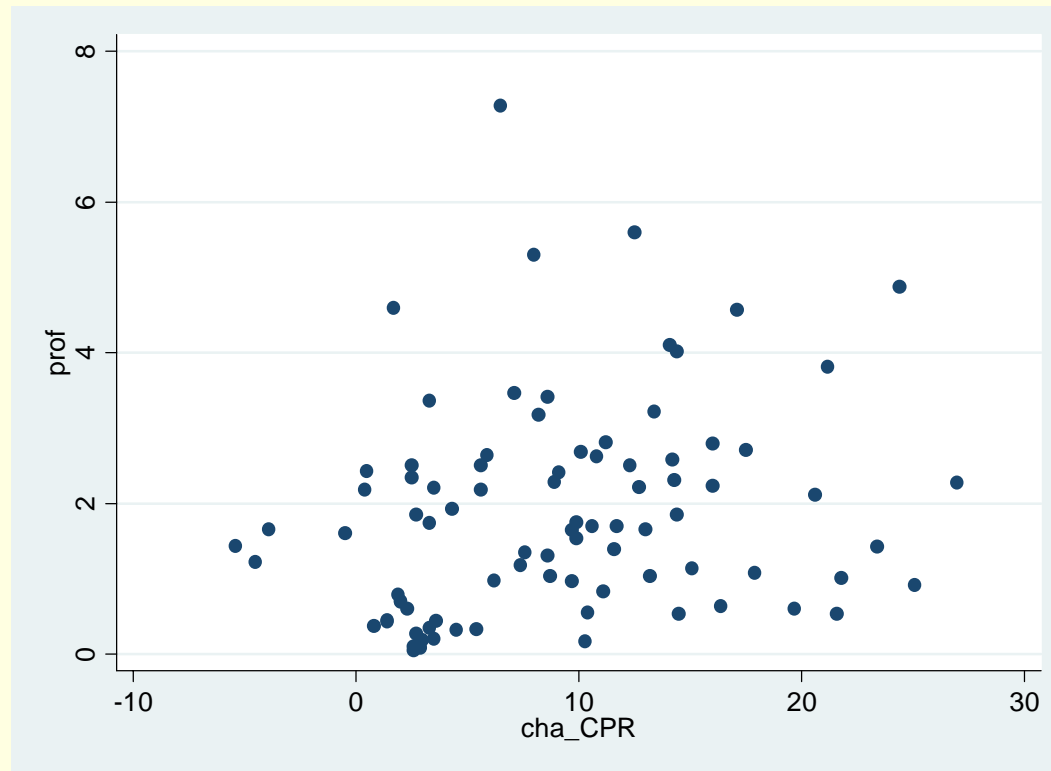


Figure : Scatter plot of percentage of women working in professional, managerial etc occupation and change in CPR between the first round of DHS in early 90s and the latest round.



Future Work

- Resolve problems with Namibia and Nigeria and include those regions in the regional database.
- do an analysis for TFR (using new estimates)
- Finalize the regression analysis at the regional level...
- District level analysis depends on access to district code and comparability over time.

Future Work

- Investigate the relationship between employment and fertility at the micro/community level using data on women's participation in the labour market, including information on the typology of employment and wage, household income and land ownership from the:
 - 1992, 1998, 2005 Ghana Living Standard Surveys linked to census and/or community survey
- *Contextual information* at the cluster and district level on women's participation in the labour market as well information on the market sector of the area (i.e. proportion of agricultural land, % in industry, manufactory, etc..) will be linked to the micro-data.
- This will allow analysis of the contextual effect of living in an area with higher participation of women in the modern sector and her uptake of contraception.

