Location and Migration: How Military Wives Can Inform The Discussion Of The Gender Wage Gap
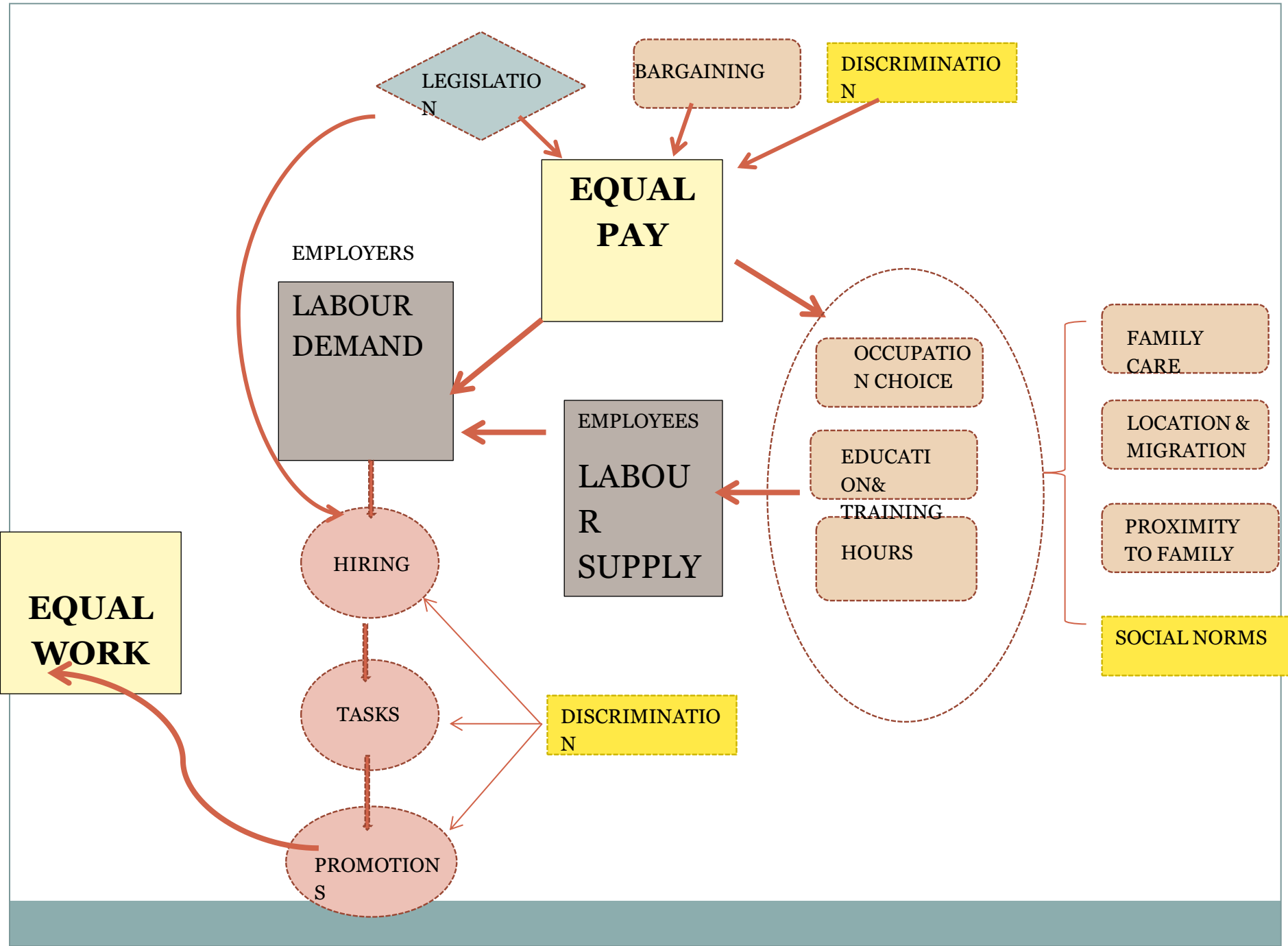
JANICE COMPTON

GUELPH, APRIL 17, 2015

BASED ON WORK JOINT WITH

BREANN WHITBY

THE GENDER GAP

- EQUAL PAY <u>FOR</u> EQUAL WORK

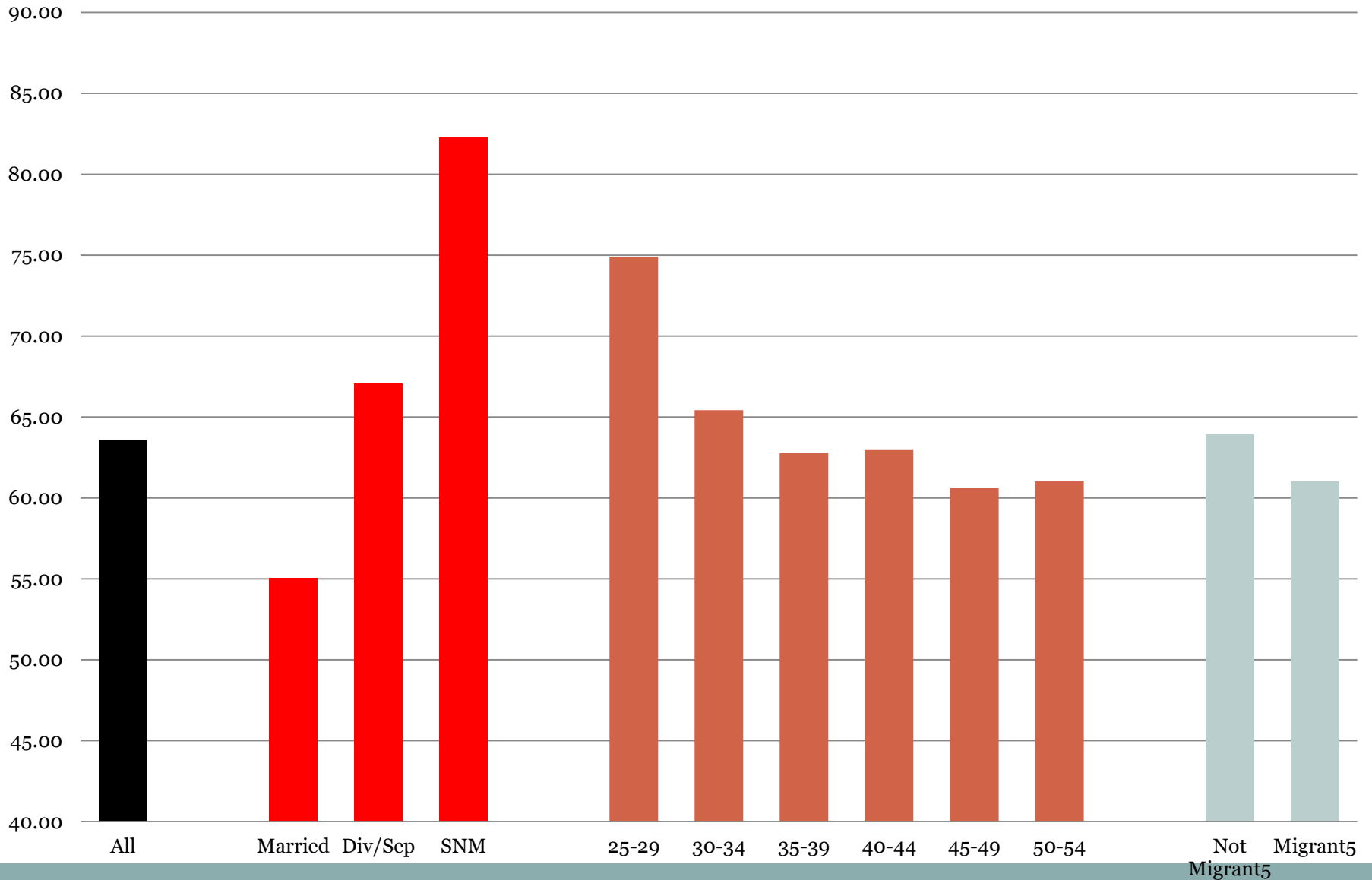- EQUAL PAY <u>AND</u> EQUAL WORK

MIGRATION/LOCATION

- **WHERE WE LIVE, HOW LONG WE'VE LIVED THERE AND HOW LONG WE EXPECT TO LIVE THERE IMPACTS LABOUR SUPPLY DECISIONS.**
  - Affects women more than men.
  - Affects married women more than unmarried women.

  - **Where we live – size of location, proximity to family**
    - Proximity to family most important for women – care requirements
    - Location size important for joint career couples

  - **Migration and Expected Migration**
    - Married women most likely to be tied migrants
    - Labour supply of married women most elastic.
    - Occupation choice influenced by anticipated migration
    - Investment in location specific human capital
    - Employee and Employer
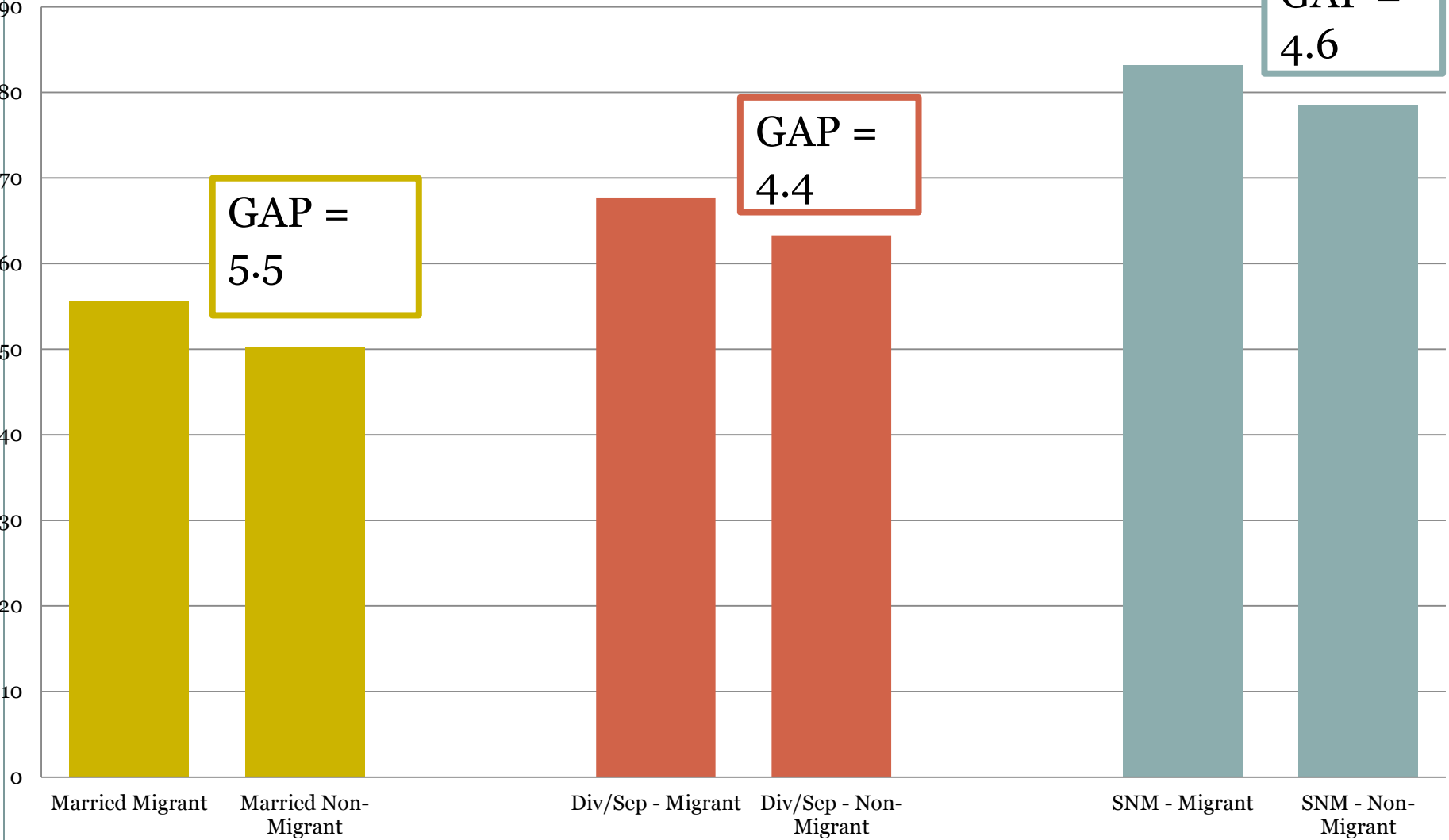
    - Change over time

CANADIAN DATA

- Census PUMF 2006

- Annual Wage and Salary Earnings

- Men and Women 25-54

Wage Gap (Annual Earnings) 25-54 with Positive Wage/Salary

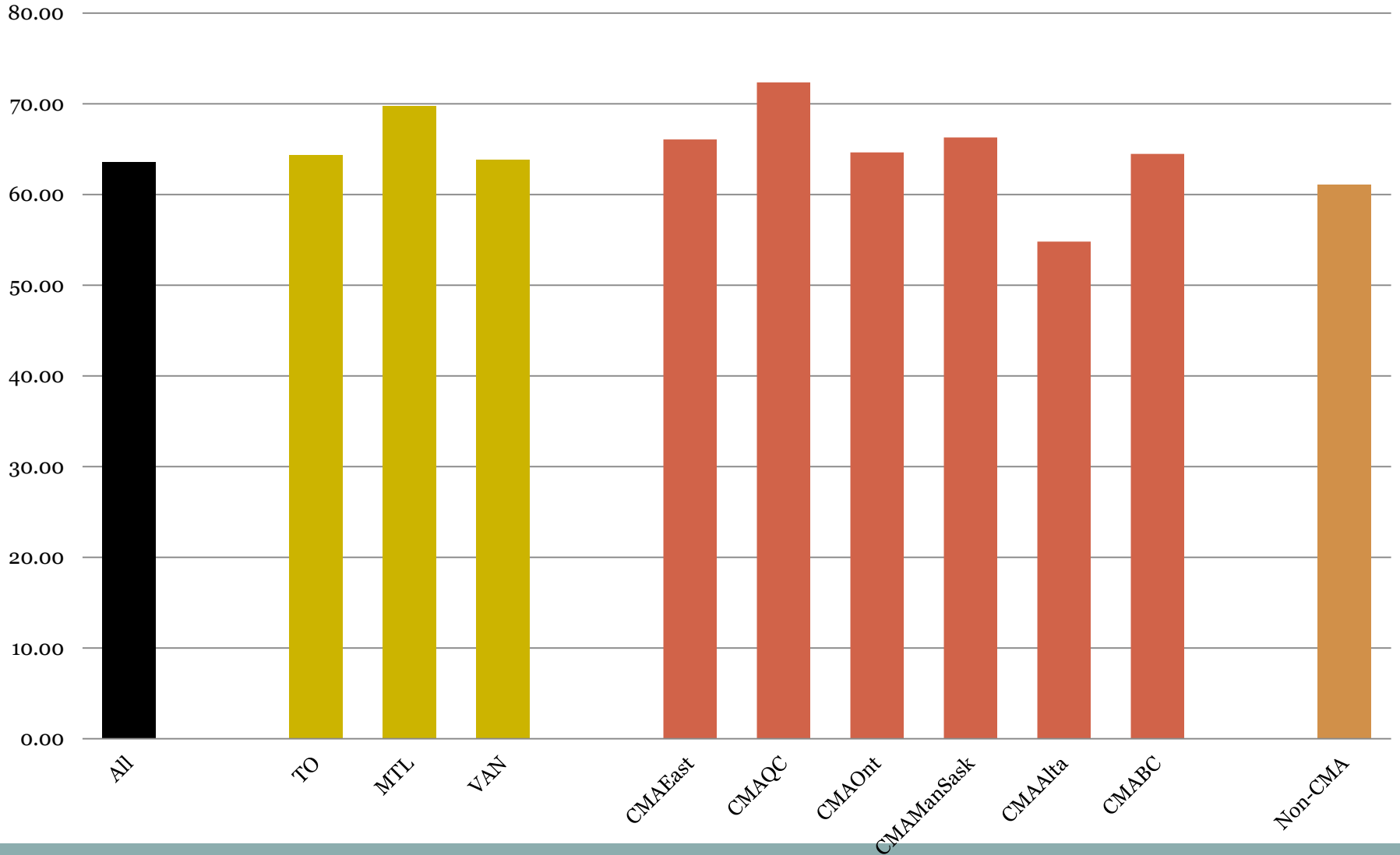|	Value
All	63.5
Married	55.0
Div/Sep	67.0
SNM	82.3
25-29	75.0
30-34	65.4
35-39	62.8
40-44	63.0
45-49	60.6
50-54	61.0
Not Migrant5	64.0
Migrant5	61.0

Wage Gap (Annual Earnings) 25-54 with Positive Wage/Salary

Wage Gap (Annual Earnings) 25-54 with Positive Wage/Salary

MIGRATION/LOCATION

- Impact of Migration/Location on labour supply is difficult - ENDOGENOUS DECISION

MILITARY WIVES

- **Non-military women married to men in the military**

- **Location is exogenous, migration is frequent**
  - US: 12 moves on average in 20 year career.

- **Allows us to consider the effect of the lack of location permanency on labour supply.**

MILITARY WIVES

- **Suppose being a military wife was exogenous.**
  - Draft?

  - Then :
  $$LFP_i = \beta_0 + \gamma MILWIFE_i + \theta X_i + \varepsilon_i$$

  - γ would measure the effect of transiency on Labour Force Participation.
  - Total effect – employee and employer

- **But :endogeneity of being a military wife.**
  - Cannot rid this altogether.
  - Control for Husband's characteristics
  - Assume marrying the man, not the soldier.

POLICY RELEVANCE

- **Understand the factors influencing women's labour force behaviour.**
  - Effect of anticipated, frequent migration.
  - How does this differ from actual migration shock?
  - What characteristics make migration effect stronger/weaker?

- **Policies that impact migrants – likely to have gendered effects.**
  - EI Policies on Acceptable Radius of Job Search
  - Provincial Occupational Licensing
  - Childcare wait lists

PREVIOUS RESEARCH

- **Military Wives Labour Supply**:
  - Payne, Warner, and Little (1992), Harrell, Lim, Werber, and Golinelli Harrell (2004), Cooke and Speirs (2005), Hosek and MacDermid Wadsworth (2013).

  - Military spouses less likely to be employed, work fewer hours, more likely to be unemployed, earn less.
  - Smaller, targeted datasets.
  - Do not control for husband's characteristics.

- **Using Exogeneity of Military Location**
  - Lleras-Muney (2010)
  - Compton, Pollak (2014)

DATA

- **US Data**

- **5 Cross Sections** :
  - Each has approx. 2M observations, 20,000-30,000 Military Wives

- **1990, 2000 Census IPUMS**
  - 5-Year Migration Data

- **2000, 2001-2005 and 2006-2010 ACS IPUMS**
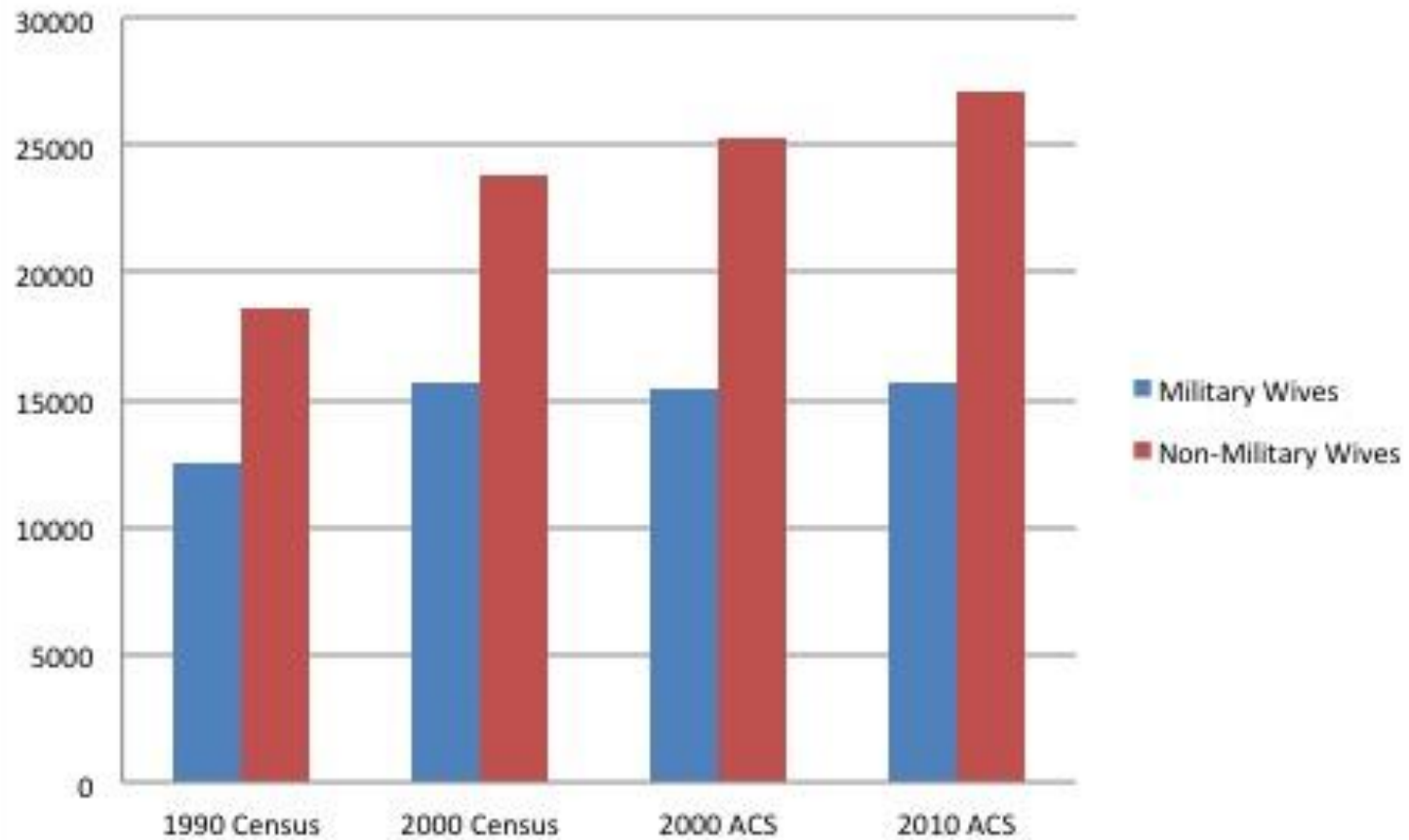 - 1-Year Migration Data

Sample

- Female
- Age 18-55
- Legally married (excludes common law) to a male of any age
- Spouse present in household

- Military Wife – Not in military themselves

- Cannot identify military rank.

|	Mil Wives	Non-Mil Wives		Mil Wives	Non-Mil Wives		Mil Wives	Non-Mil Wives
Wife's Characteristics			**Husband's Characteristics**			**Place/Migration Characteristics**		
Age	32.38	40.19	**Age**	33.74	43.18	**No Migration within Past Year**	64.70	88.27
	(8.05)	(9.00)		(8.03)	(9.63)	**Migrated within State**	13.58	9.24
			Group: Age 18-24	14.90	2.20	**Migrated across State**	21.72	2.49
Group: Age 18-24	18.54	4.07	**Group: Age 25-34**	41.63	20.79			
Group: Age 25-34	43.32	25.12	**Group: Age 35-44**	34.25	32.74	**Unknown**	9.03	7.21
Group: Age 35-44	29.79	34.17	**Group: Age 45-54**	8.62	33.09	**Not in MSA**	13.65	15.15
Group: Age 45-54	8.35	36.63	**Group: Age 55+**	0.59	11.17	**In MSA**	77.32	77.64
Less Than HS	3.00	8.94	**Less Than HS**	0.41	10.18	**New England**	2.36	4.79
HS Grad	19.66	23.91	**HS Grad**	19.47	25.84	**Middle Atlantic**	4.32	12.99
More than HS	45.13	31.65	**More than HS**	48.40	28.69	**East North Central**	4.23	15.91
Bachelors	23.36	23.42	**Bachelors**	18.04	21.92	**West North Central**	5.55	7.30
Post Graduate	8.84	12.07	**Post Graduate**	13.68	13.37	**South Atlantic**	34.63	18.59
						East South Central	6.51	5.78
White	77.25	79.29	**White**	79.55	79.75	**West South Central**	13.11	11.68
Black	9.14	6.73	**Black**	10.99	7.32	**Mountain**	8.40	7.41
Other	13.61	13.98	**Other**	9.46	12.92	**Pacific**	20.90	15.54
Hispanic	12.08	14.82	**Hispanic**	10.97	14.36			
English at Home	84.14	76.99						
			Total HH Income	76,848	105,849			
				(45,103)	(87,955)			
Children in the HH	72.71	72.29						
Children under 5	40.05	25.11	**In the Labour Force**	100	98.02			
				0.00	(13.97)			
Usual Hours	22.76	28.29	**Usual Hours**	51.65	44.58			
	(19.49)	(18.45)		(13.73)	(10.28)			
			Wage Income	54,824	64,634			
				(29,511)	(65,335)			

Labour Force Participation Rate of Military Wives and Non-Military Wives
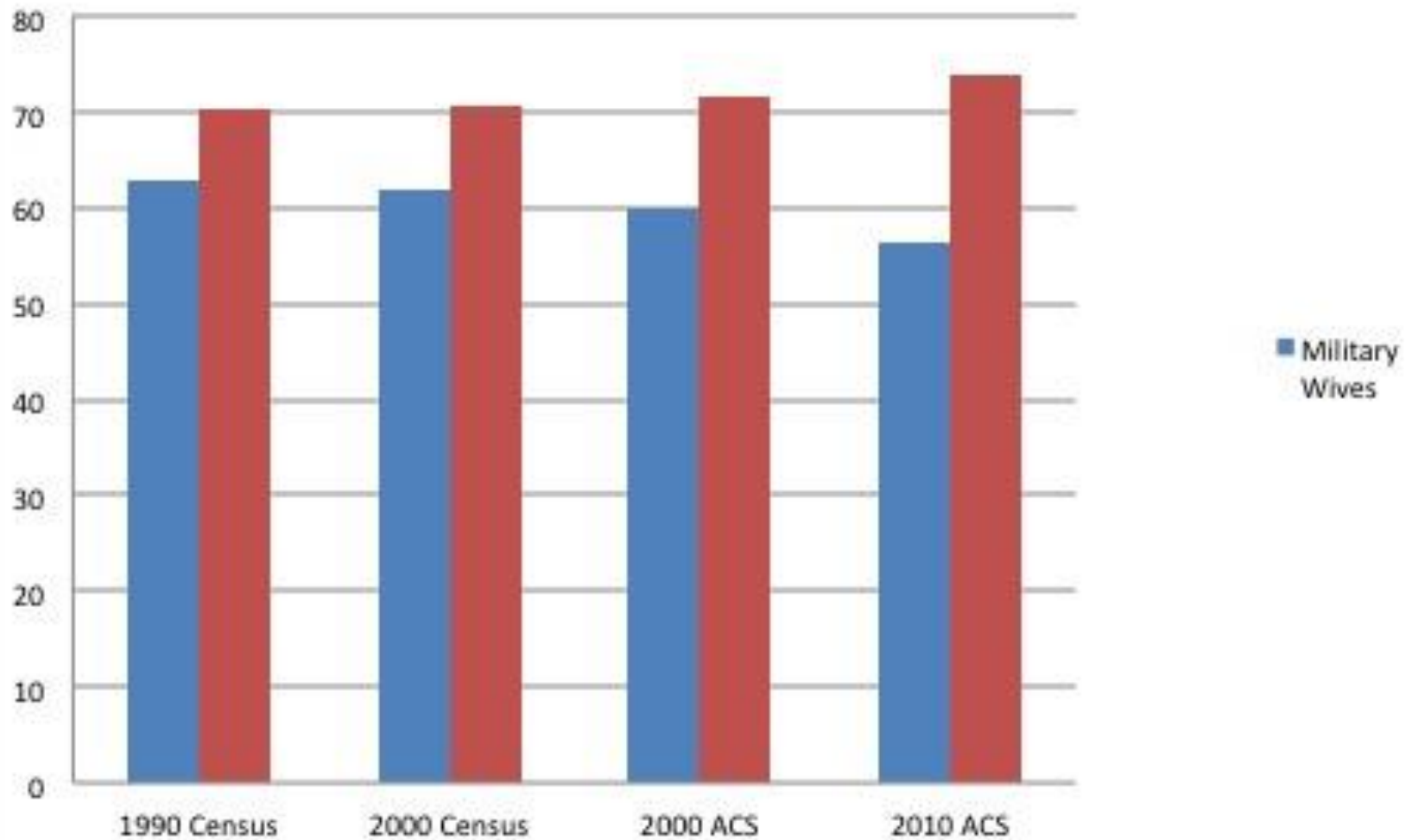
Wage Income of All Wives and Military Wives (2010 Dollars)
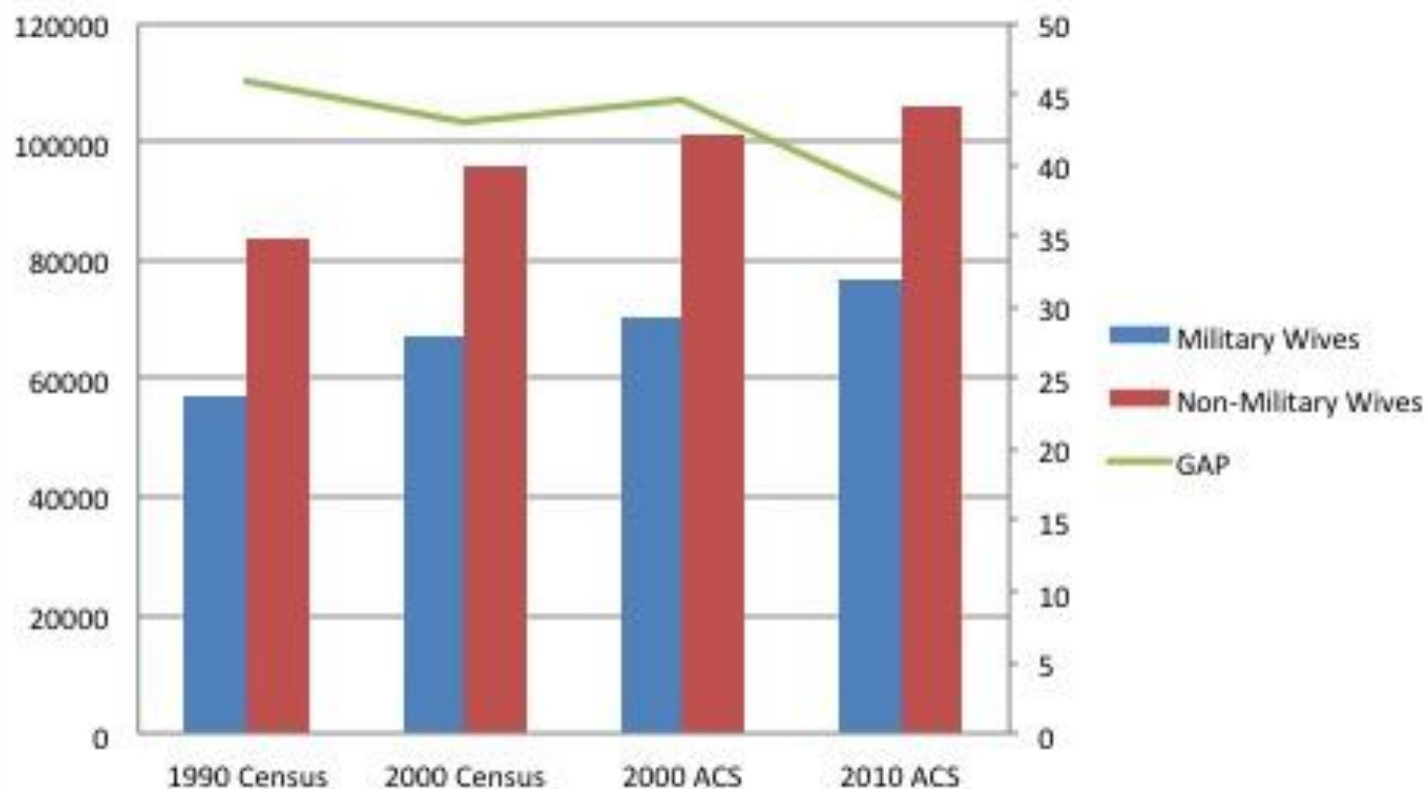
Regressions

- **Logit LFP regressions**

$$Y_i = \beta_0 + \gamma MILWIFE_i + \theta X_i + \delta Z_i + \mu W_i + \varepsilon_i$$

- **X: Her Characteristics**: Age Group, Education, Whether Children, Whether Children under 5, race, Hispanic, English at home, Estimated Wage, Migration

- **Z: His Characteristics**: Age group, Education, race, Hispanic, Occupation, Income

- **W: Place Characteristics**: Region, Metropolitan Status.

Coefficient on MilWife

	Only Her Characteristics	Add Place Characteristics	Add His Characteristics
MILWIFE 2010ACS	0.444***	0.516***	0.511***
	(0.00633)	(0.00749)	(0.00756)
MILWIFE 2000ACS	0.566***	0.648***	0.603***
	(0.0456)	(0.0530)	(0.0502)
MILWIFE 2000C	0.652***	0.872***	0.794***
	(0.00967)	(0.0132)	(0.0123)
MILWIFE 1990C	0.646***	0.843***	0.753***
	(0.00784)	(0.0106)	(0.00963)

Regressions

- **Interactions**

$$Y_i = \beta_0 + \gamma MILWIFE_i + \theta_1 EDUC_i + \alpha MILWIFEXEDUC_i + \theta X_i + \delta Z_i + \mu W_i + \varepsilon_i$$

- **Education**
- **Children**
- **Metropolitan Status**
- **Migration – within state, across state**
- **Spouse's Income**

Interactions Results

- **EDUCATION X MILWIFE**
  - Returns to education still positive, increasing with education but slope is flatter with interaction.

	1990Census	2000Census	2000ACS	2010ACS
High School	1.913***	1.908***	1.925***	2.070***
	(0.0108)	(0.0116)	(0.0775)	(0.0155)
More then HS	2.938***	2.941***	2.795***	3.221***
	(0.0184)	(0.0188)	(0.116)	(0.0248)
Bachelor's	4.031***	4.053***	3.795***	4.515***
	(0.0320)	(0.0309)	(0.179)	(0.0386)
More than Bachelor's	8.006***	7.308***	6.767***	8.716***
	(0.0906)	(0.0719)	(0.393)	(0.0879)
MIL X High School	0.800***	0.832***	0.771	0.773***
	(0.0346)	(0.0577)	(0.321)	(0.0713)
MIL X More then HS	0.684***	0.670***	0.623	0.650***
	(0.0294)	(0.0449)	(0.248)	(0.0578)
MIL X Bachelor's	0.658***	0.611***	0.701	0.723***
	(0.0343)	(0.0448)	(0.299)	(0.0664)
MIL X More than Bachelor's	0.537***	0.595***	0.988	0.730***
	(0.0457)	(0.0565)	(0.545)	(0.0741)
Observations	1,714,461	1,797,204	49,951	1,749,936

SLOPE OF EDUCATION EFFECT FLATTER FOR MILITARY WIVES
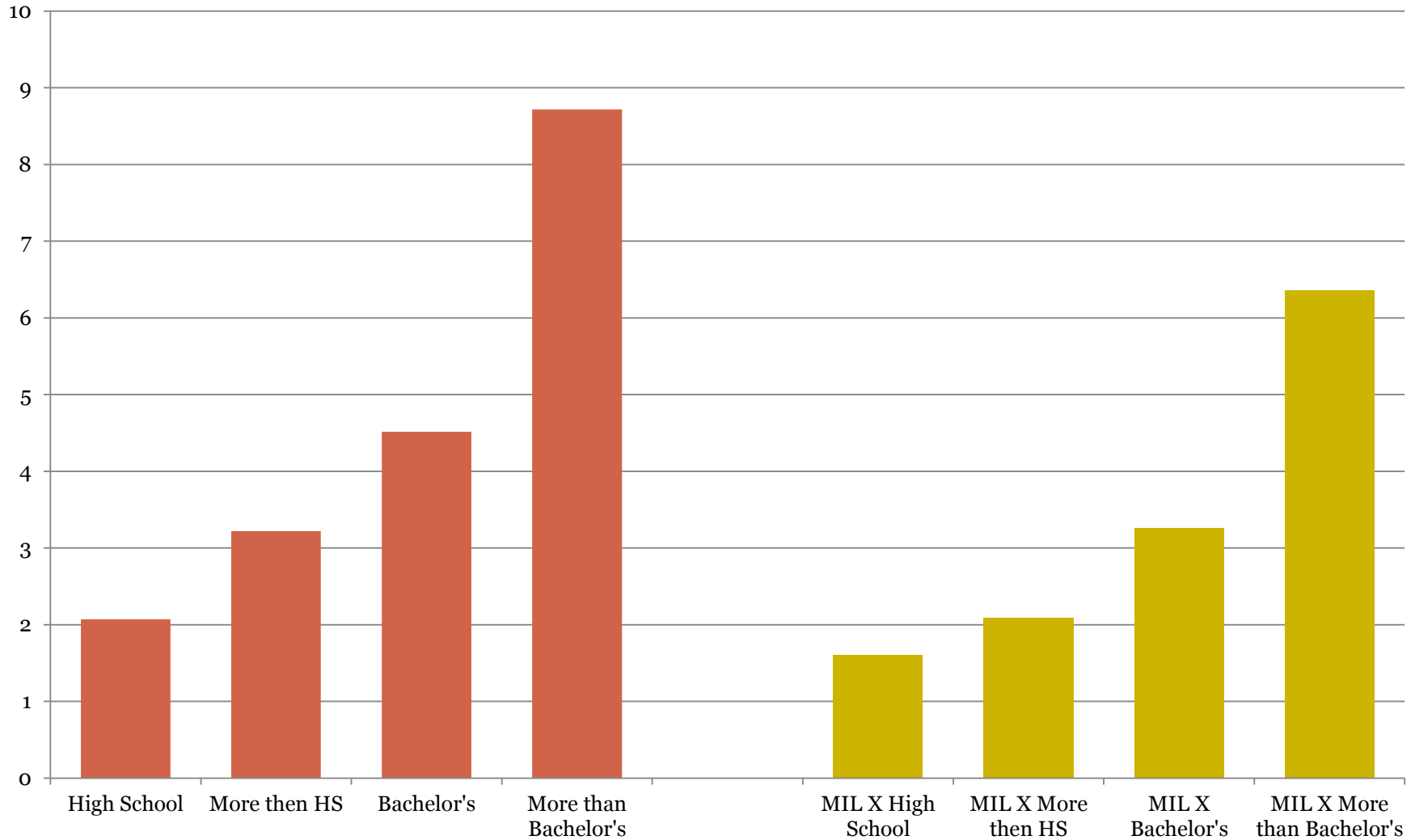
Interactions Results

- **EDUCATION X MILWIFE**

- **MIGRATION X MILWIFE**

  - Recent Migration lowers LFP for both instate and across state moves.

    - Fall in LFP is LESS for military wives (anticipated)

  - 5 yr Migration lowers the labour force probability for across state moves, not for interstate moves.

    - For MILWIVES, lowers LFP for both across and within state.

    - Note result is same whether moved with husband or not – negative effect is migration, not necessarily tied.

	1990Census 5 year	2000Census 5 year	2000ACS 1 year	2010ACS 1 year
Migrate Within State Alone	1.094***	1.016		
	(0.0122)	(0.0110)		
Migrate Across State Alone	0.694***	0.628***		
	(0.00943)	(0.00785)		
Migrate Within State w Spouse	1.056***	1.006	0.864***	0.847***
	(0.00460)	(0.00428)	(0.0329)	(0.00582)
Migrate Across State w Spouse	0.607***	0.566***	0.470***	0.391***
	(0.00388)	(0.00350)	(0.0286)	(0.00446)
MIL X Migrate Within Alone	0.876*	0.782***		
	(0.0637)	(0.0704)		
MIL X Migrate Across Alone	0.954	1.082		
	(0.0767)	(0.117)		
MIL X Migrate Within w Spouse	0.858***	0.764***	1.114	1.128***
	(0.0401)	(0.0425)	(0.284)	(0.0502)
MIL X Migrate Across Spouse	0.971	0.919*	1.222	1.477***
	(0.0379)	(0.0425)	(0.251)	(0.0553)
Observations	1,714,461	1,797,204	49,951	1,749,936

Interactions Results

- **EDUCATION X MILWIFE**
- **MIGRATION X MILWIFE**
- **METROPOLITAN STATUS X MILWIFE**
  - LFP is greater in metropolitan areas.
  - Even higher for military wives.

Interactions Results

- **EDUCATION X MILWIFE**
- **MIGRATION X MILWIFE**
- **METROPOLITAN STATUS X MILWIFE**
- **CHILDREN X MILWIFE**
  - Children have a negative effect on LFP, more negative for military wives.

Interactions Results

- **EDUCATION X MILWIFE**
- **MIGRATION X MILWIFE**
- **METROPOLITAN STATUS X MILWIFE**
- **CHILDREN X MILWIFE**
- **SPOUSE'S INCOME X MILWIFE**
  - Spouses income has a negative effect on the LFP of all married women in the sample.
  - Smaller effect for military wives – they are less responsive to changes in husband's income.

Oaxaca Decomposition in 2010

○ **2010 Military Wives vs. Non-Military Wives**

2010	Military Wives	Non Military Wives	GAP
LFP	56.4	74.0	17.6

○ **How much of this gap is due to differences in characteristics, how much is due to differences in coefficients?**

Oaxaca Decomposition in 2010

- Key results: In 2010 – 70% of the difference in LFP between military wives and non-military wives due to coefficients.
  - More specifically: the differences in the coefficients on her education
    - Marginal effect of education on LFP positive for both military wives and non-military wives but less so for military wives

SUMMARY/Implications

- **Effect of MILWIFE has grown increasingly negative over time.**

- **Key determinant of LFPR difference between MILWIFE and Non-MILWIFE in 2010 is due to education coefficient differences.**

- **This is Good news.   Suggests We're coming a long way baby!**
  - Gap between women who have no location stability and everyone else is growing.
  - Suggests more stability for the rest. – more ability to invest in location specific human capital.

SUMMARY/Implications

- **Interactions: When there is little stability in location...**
  - Returns to education (ito LFP) are lower
  - Actual migration – smaller short run effect, larger long-run effect.
  - Low stability has less negative effect in a metropolitan area.
  - Low stability has a more negative effect if children
  - Women with Low stability are less responsive to changes in husbands income.

  - **Interesting sub-group for studying labour market behaviour and outcomes.**

SUMMARY/Implications

○ **Consider within household gender gap, relative wage.**

○ **nteractions: When there is little stability in location…**

- Returns to education (ito LFP) are lower

- Actual migration – smaller short run effect, larger long-run effect.

- Low stability has less negative effect in a metropolitan area.

- Low stability has a more negative effect if children

- Women with Low stability are less responsive to changes in husbands income.