

Labour Market Inequality in Brazil and India: a Comparative Study

**Panel 3**

# **Labour market inequality**

**some trends and analysis**

**São Paulo, 21st August 2014**

# Introduction

- Focuses on 1980 and beyond
- Aims to obtain objective measures of inequality
- Links to qualitative analysis presented in panels 1 and 2.



# Structure of the presentation

- Methodology
- Key trends
- Central themes of analysis  
(Regional, gender, social group/race, work type, education)
- Multivariate analysis
- Functional distribution of income
- Occupational structure
- Conclusion

# Methodology adopted for inequality analysis

## Variables

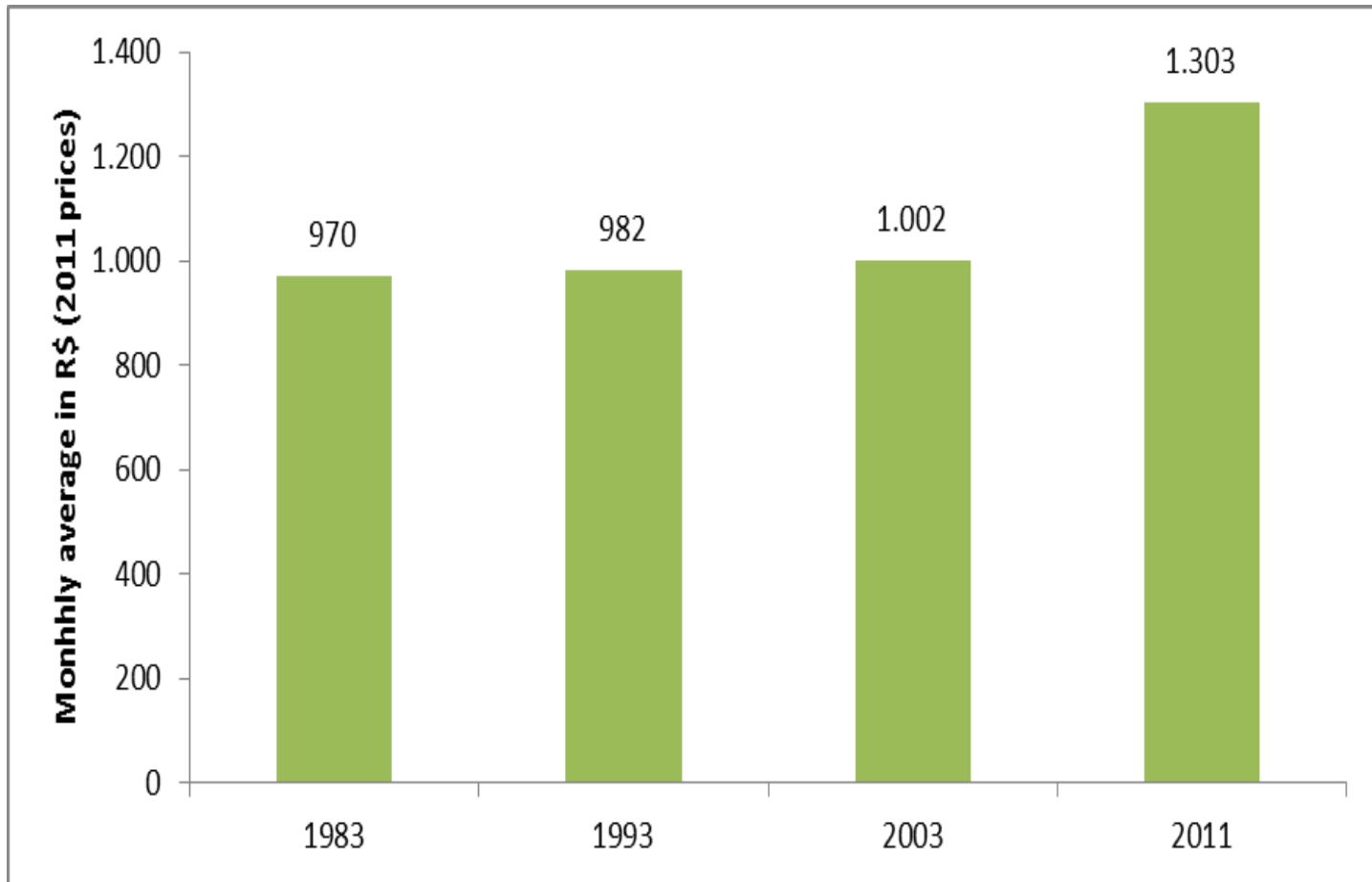
- Wages in india
- Labor income in brazil (includes self-employed)

## Methods

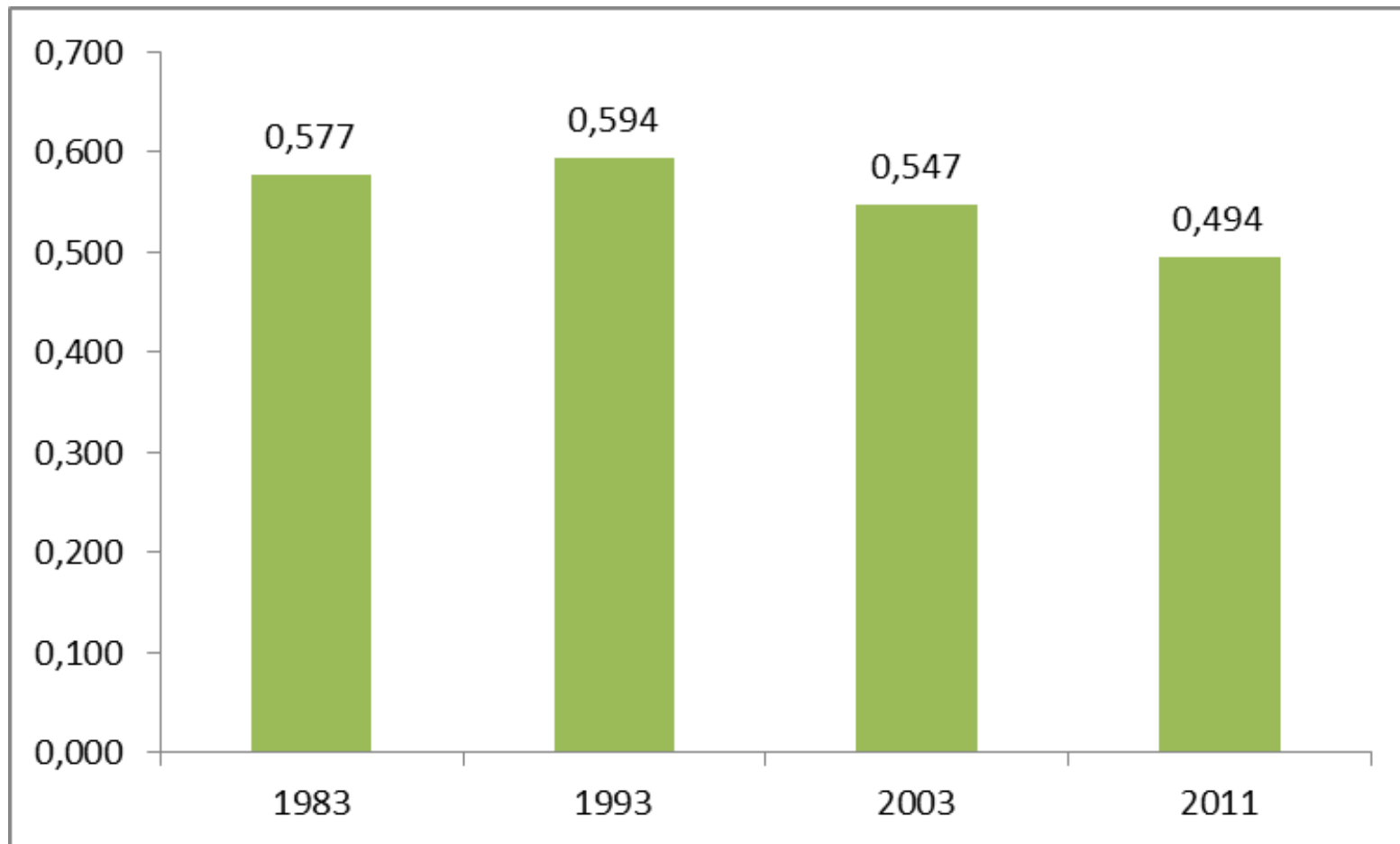
- Simple mean ratios, distribution graphs
- Traditional inequality measures: Gini and Theil indices
- Bi-variate decomposition (between and within)
- Multivariate decomposition (e.g. Fields (2001), Lerman and Yitzhaki (1985))
- Study of occupation structure using ISCO.88

# Key trends

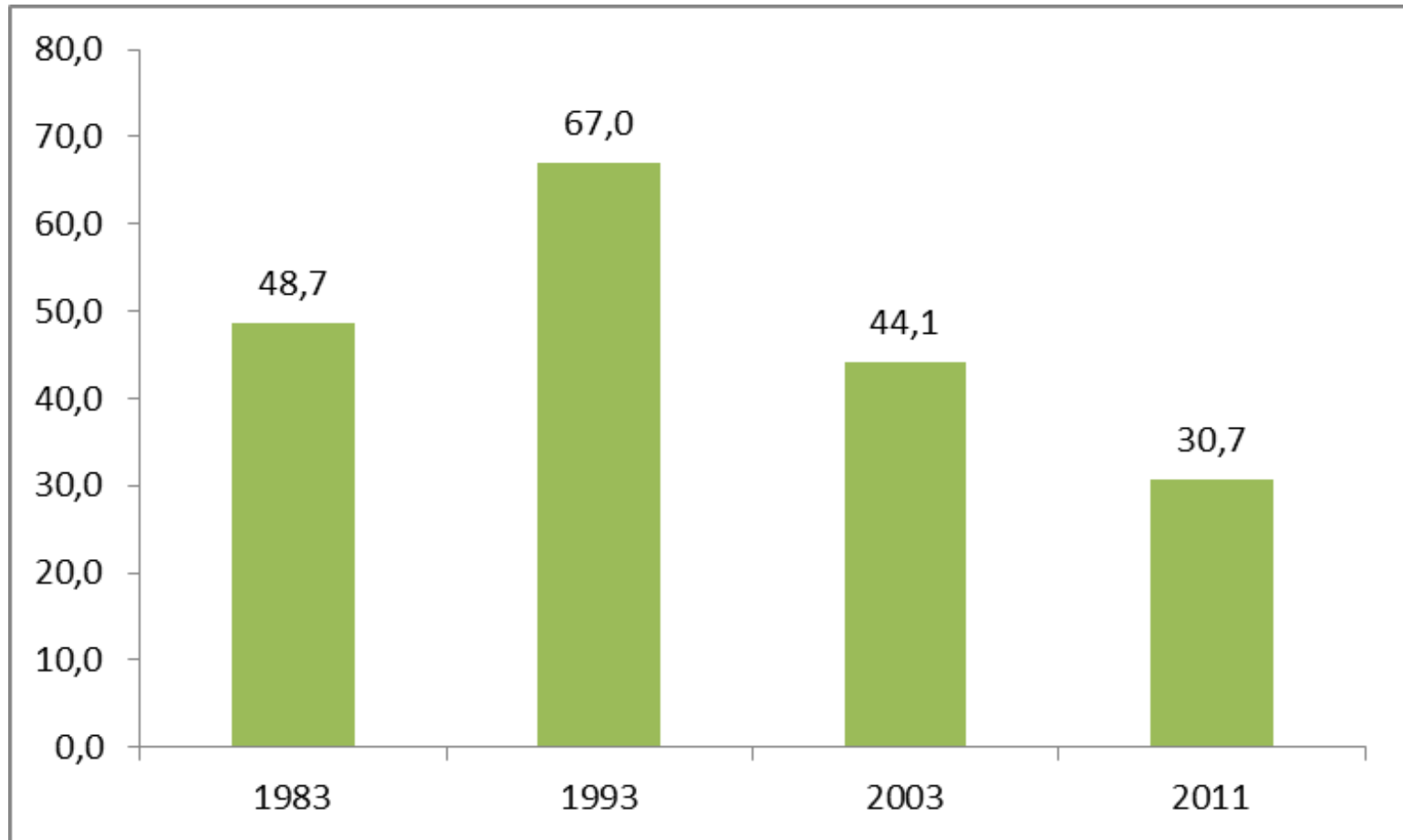
# Key trends: labour income (Brazil)



# Broad trends of inequality (Gini) – labour income in Brazil

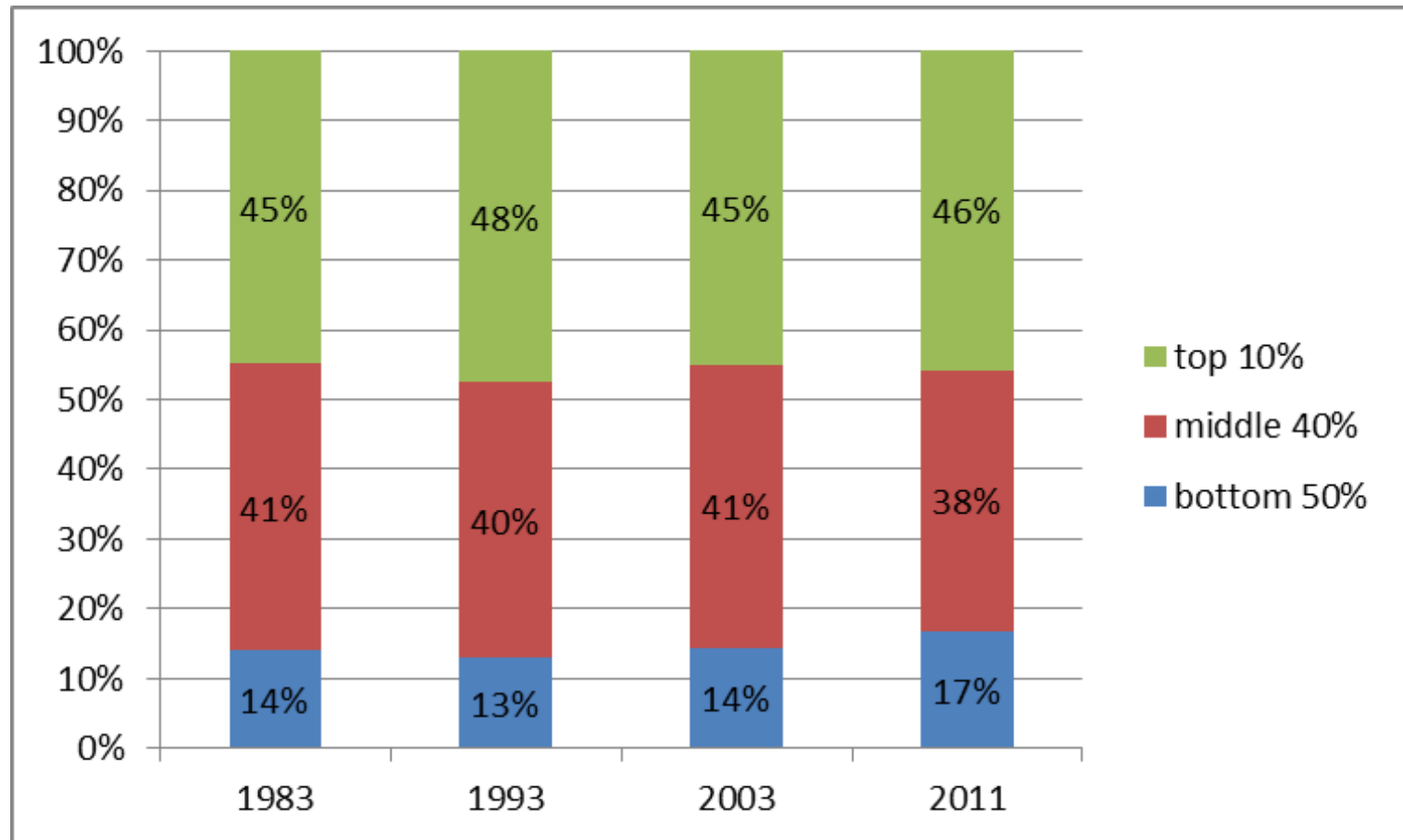


# Broad trends of inequality (top 10: bottom 10) – labour income in Brazil

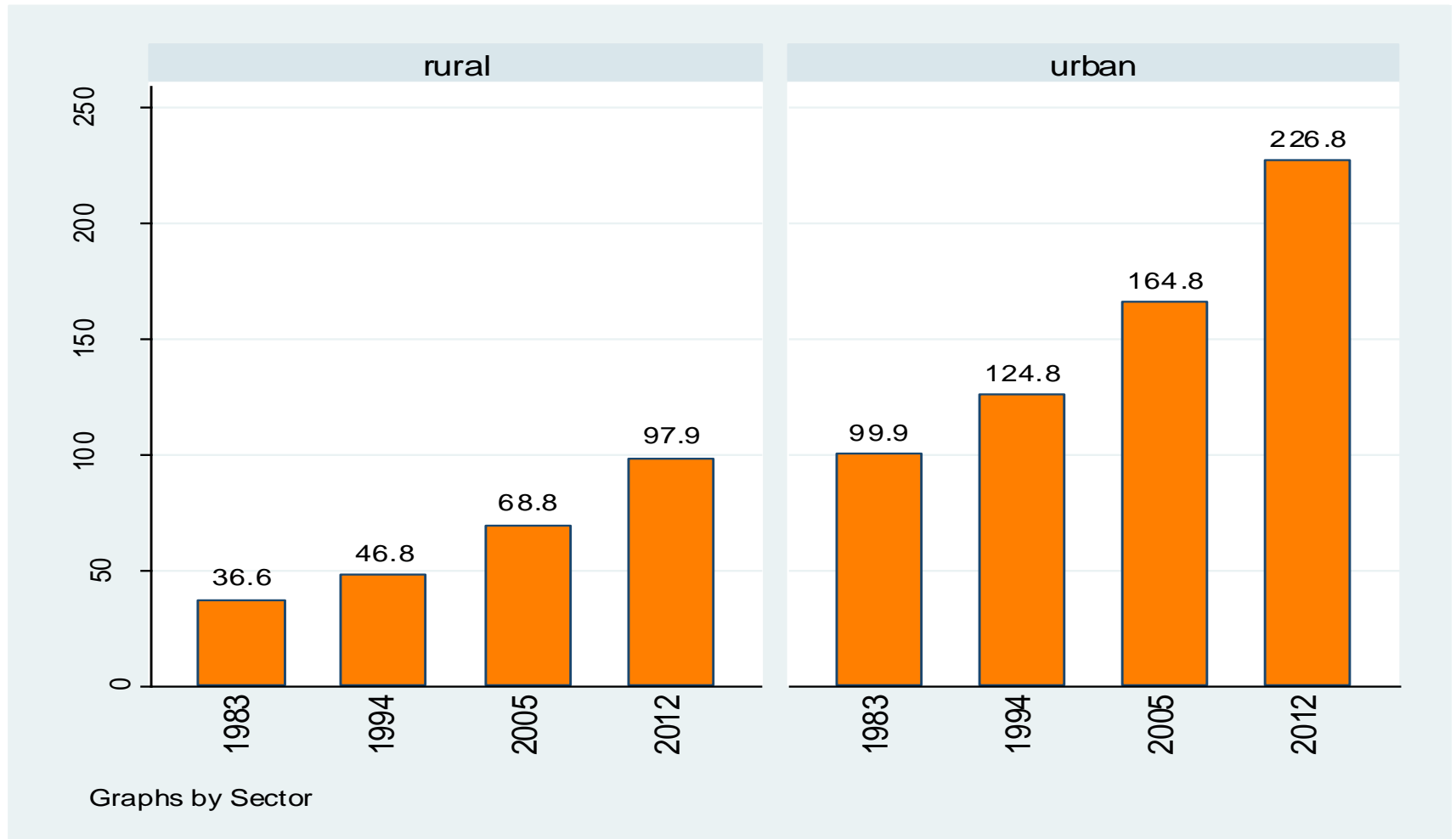




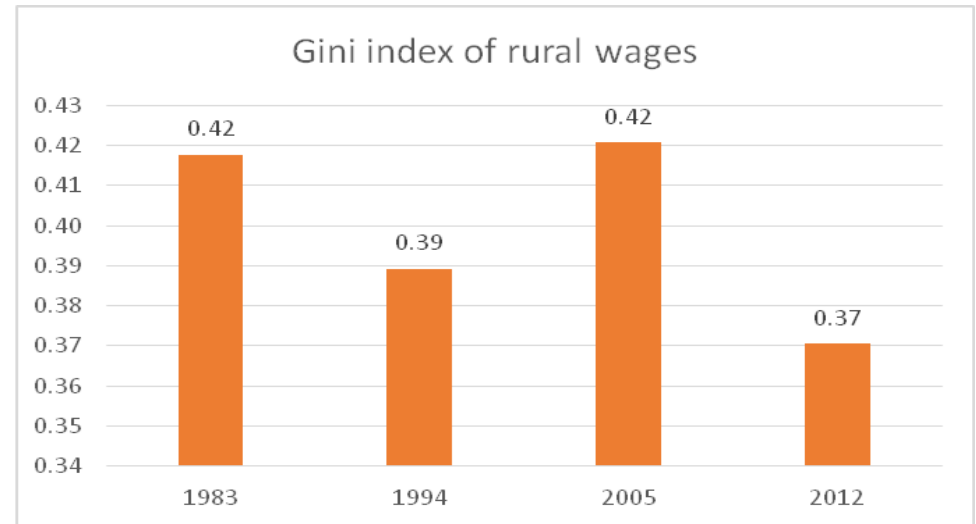
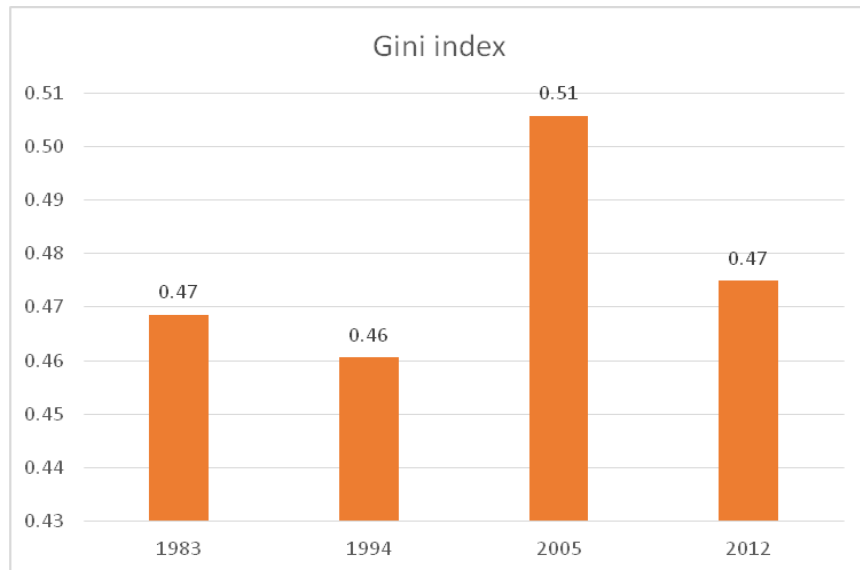
# Broad patterns of inequality (distribution graph) – labour income for Brazil



# Real wages in India

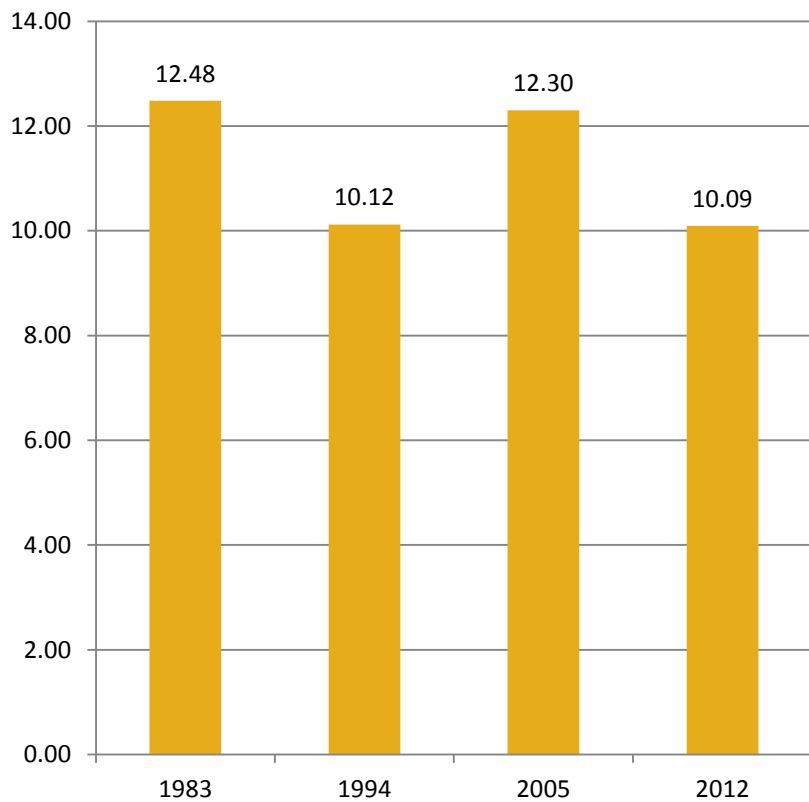


# Broad trends of inequality (Gini) – wages in India

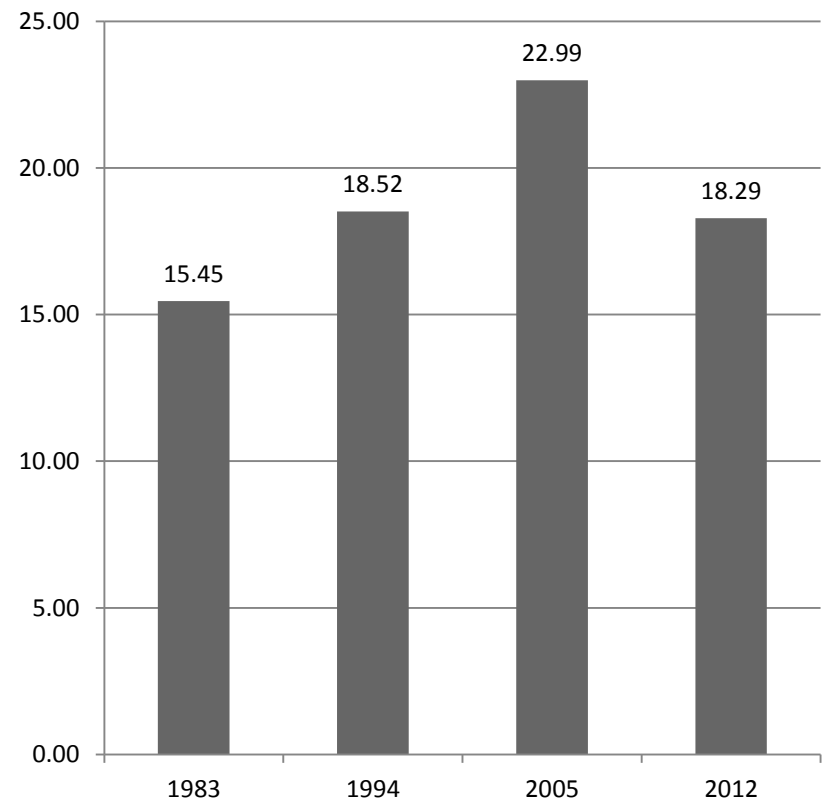


# Broad trends of inequality (top 10: bottom 10) – wages in India

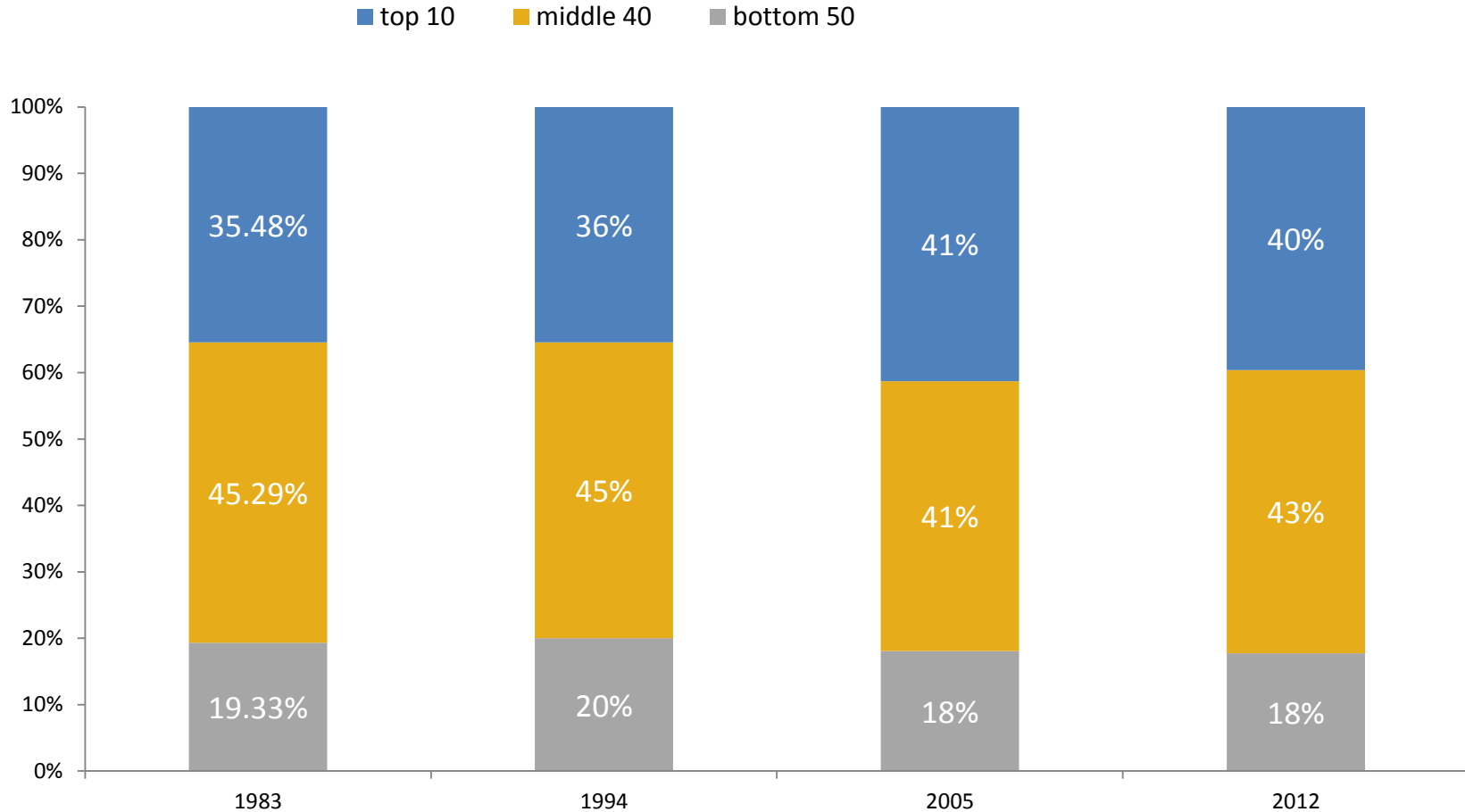
## Rural



## Urban

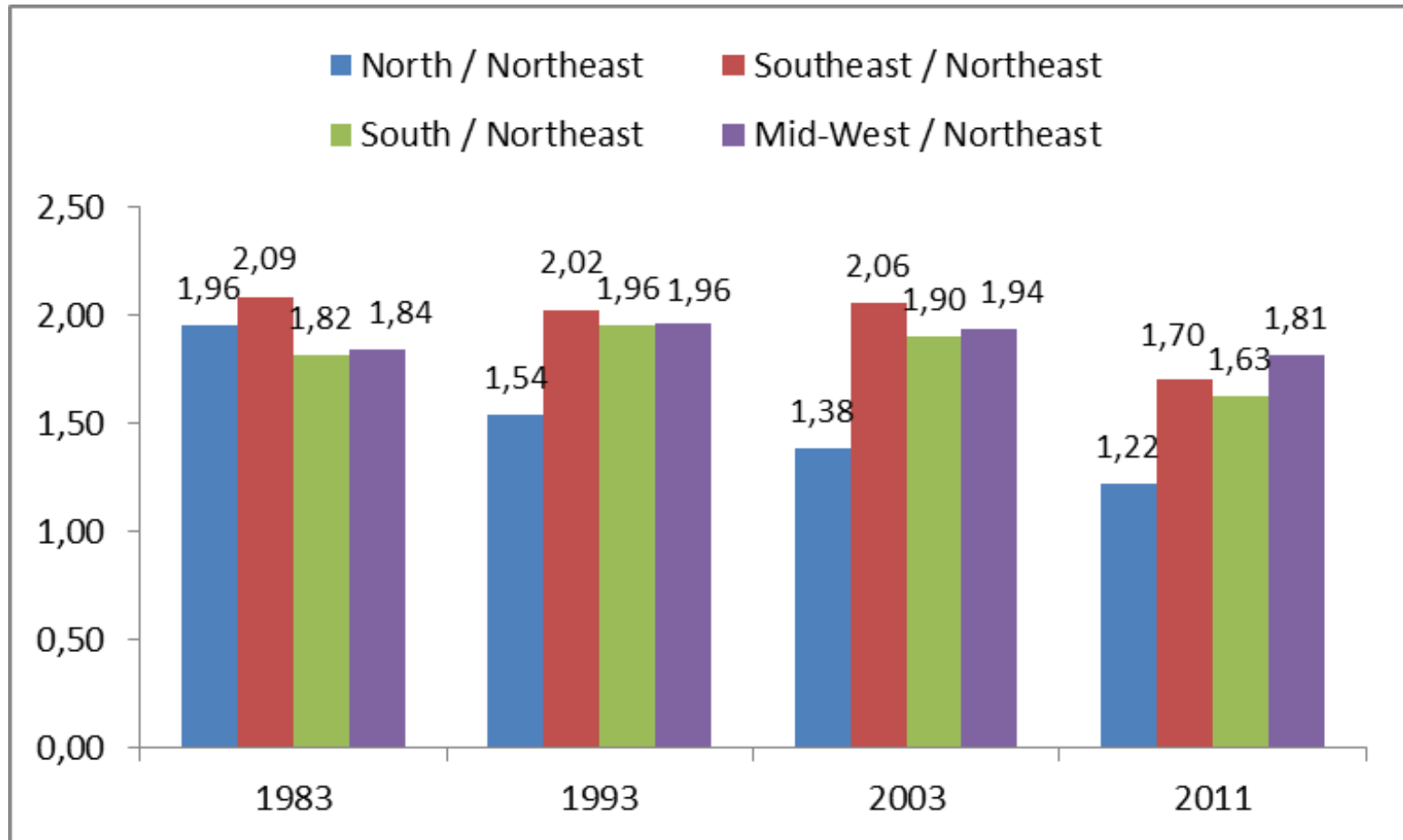


# Broad patterns of inequality (distribution graph) – wages for India

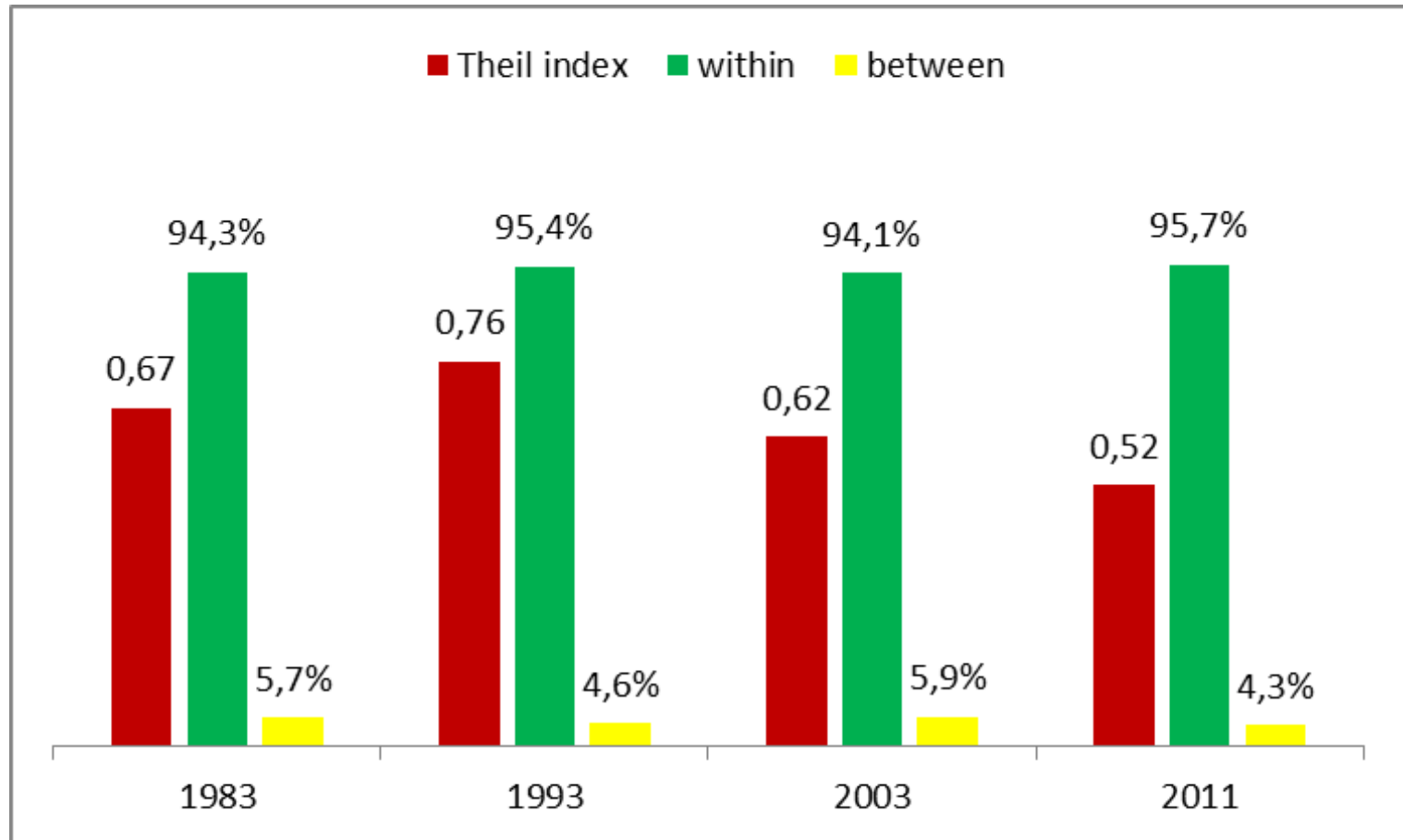


# **Region and wage inequality**

# Ratio of labour income in Brazil: region

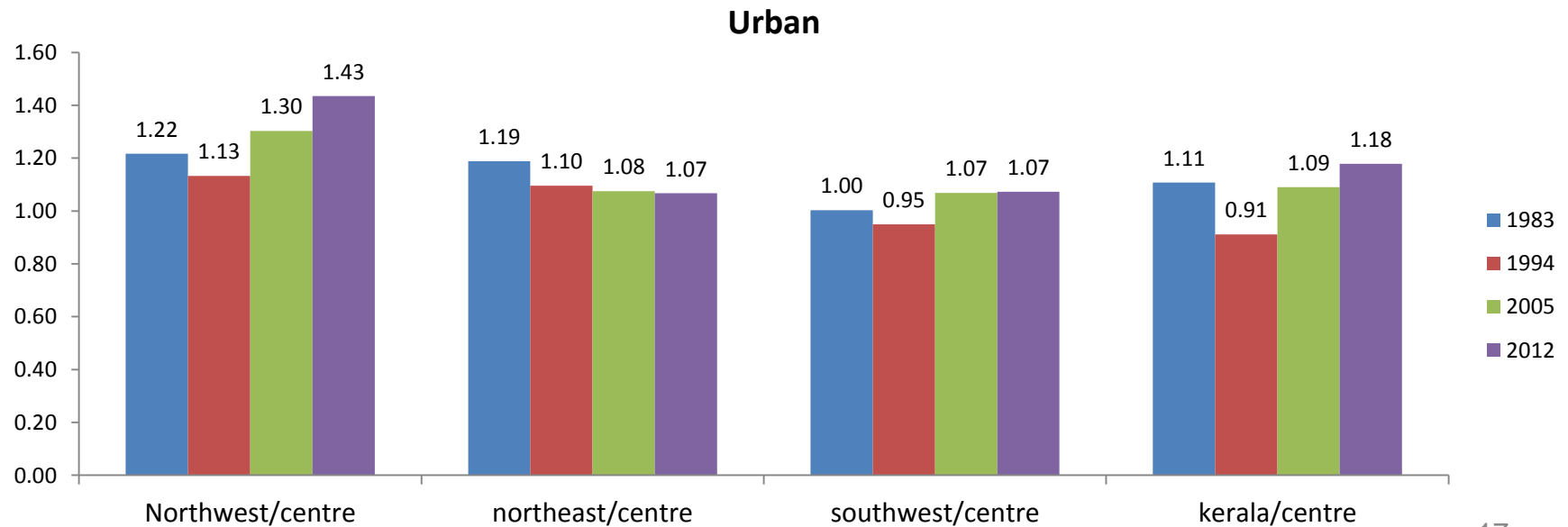
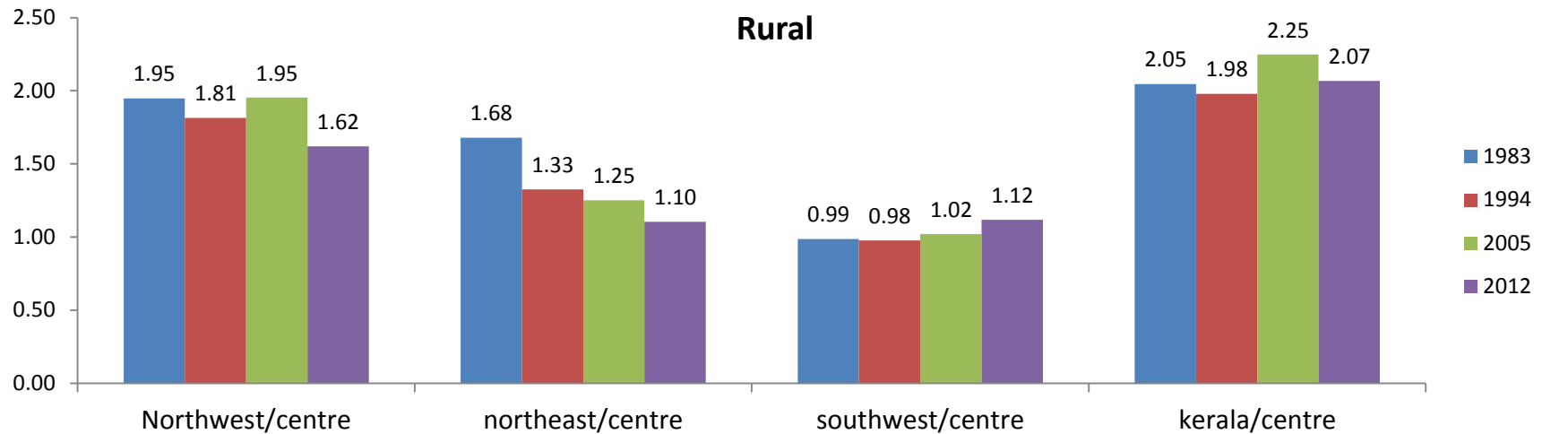


# Decomposition across region (within and between) - Brazil



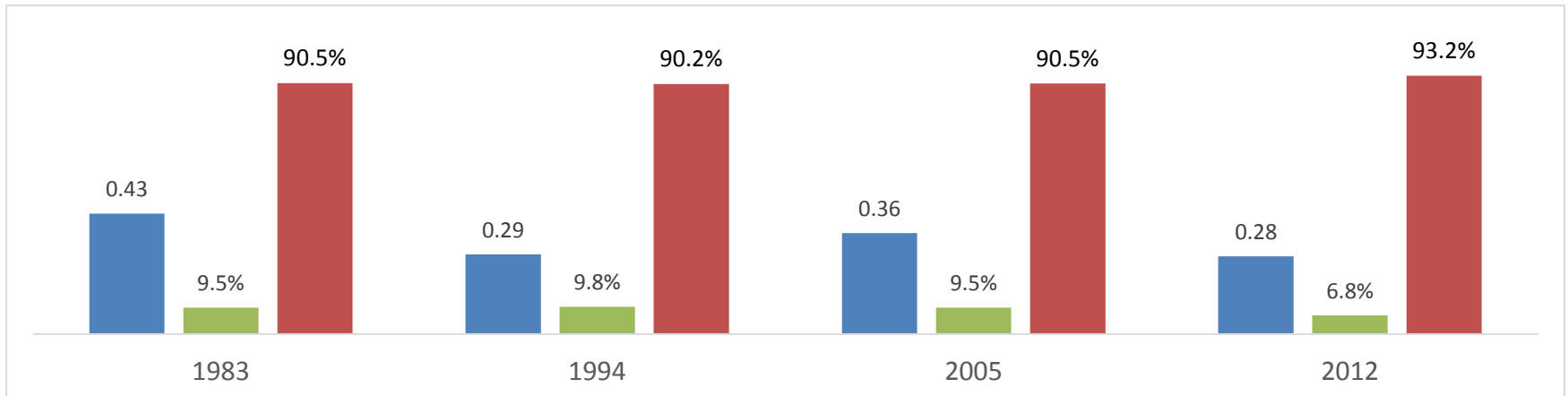


# Ratio of wage in India: region

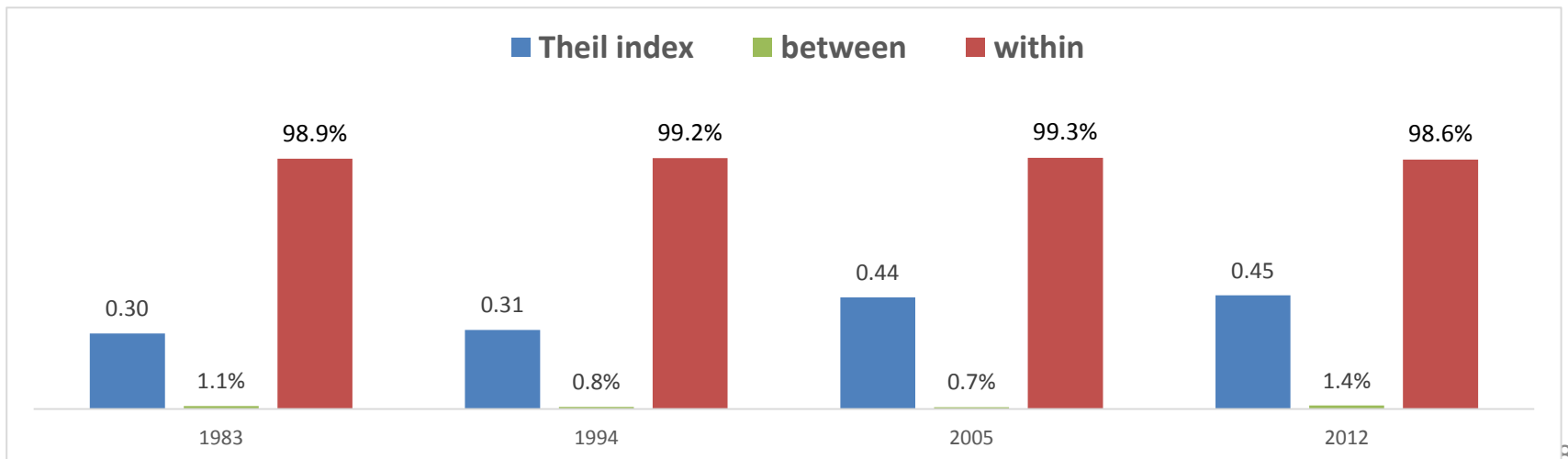


# Decomposition across region (within and between) - India

## Rural

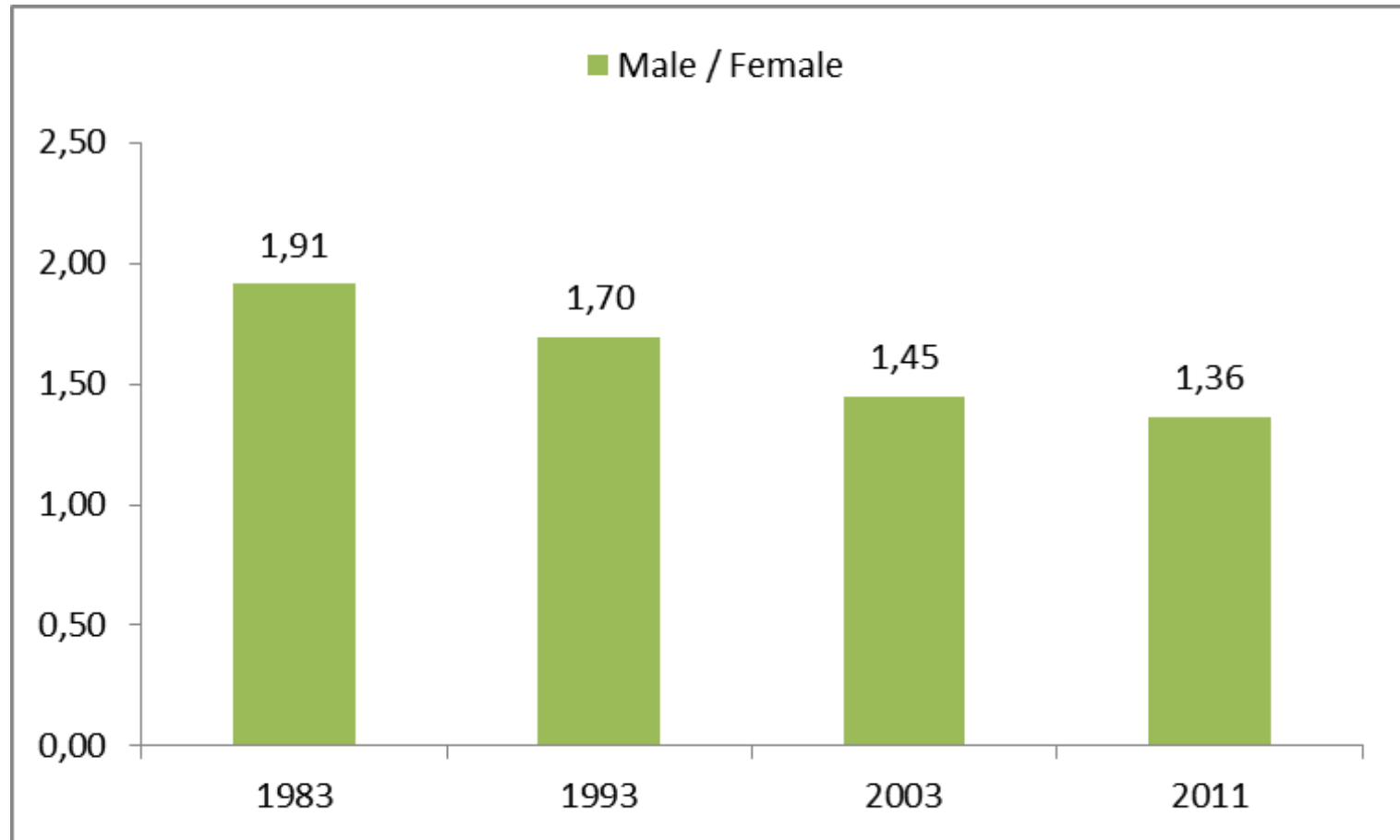


## Urban

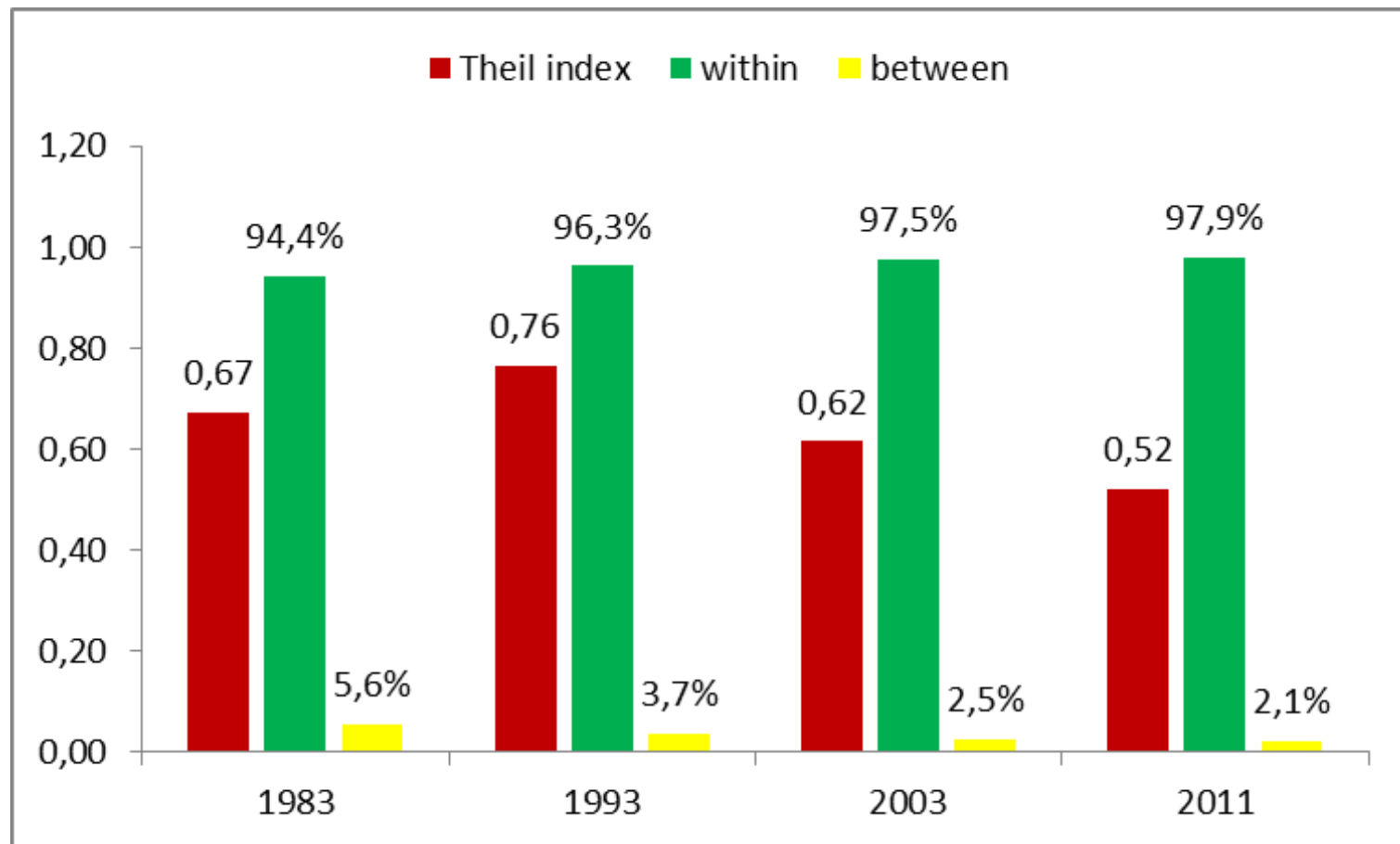


# **Gender and wage inequality**

## Ratio of labour income in Brazil: gender

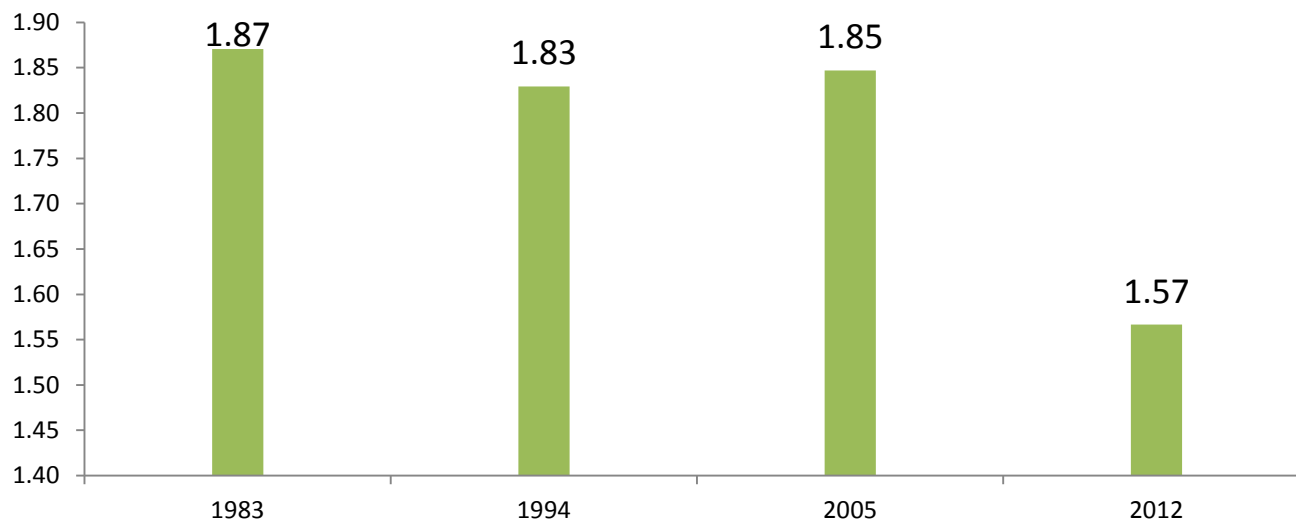


# Decomposition across gender (within and between) - Brazil

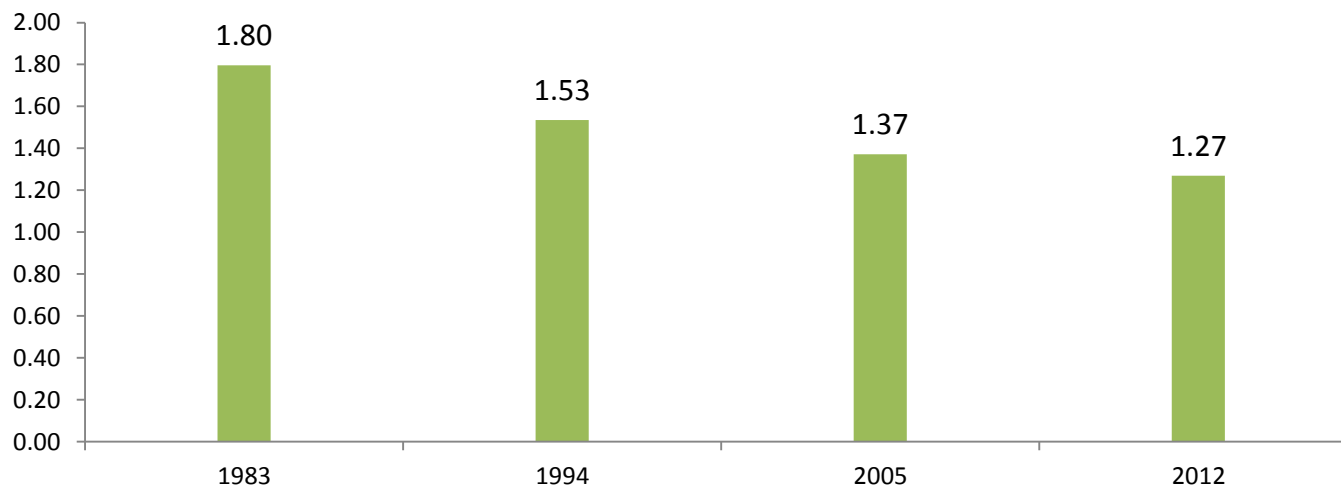


# Ratio of wage in India: male to female

## Rural

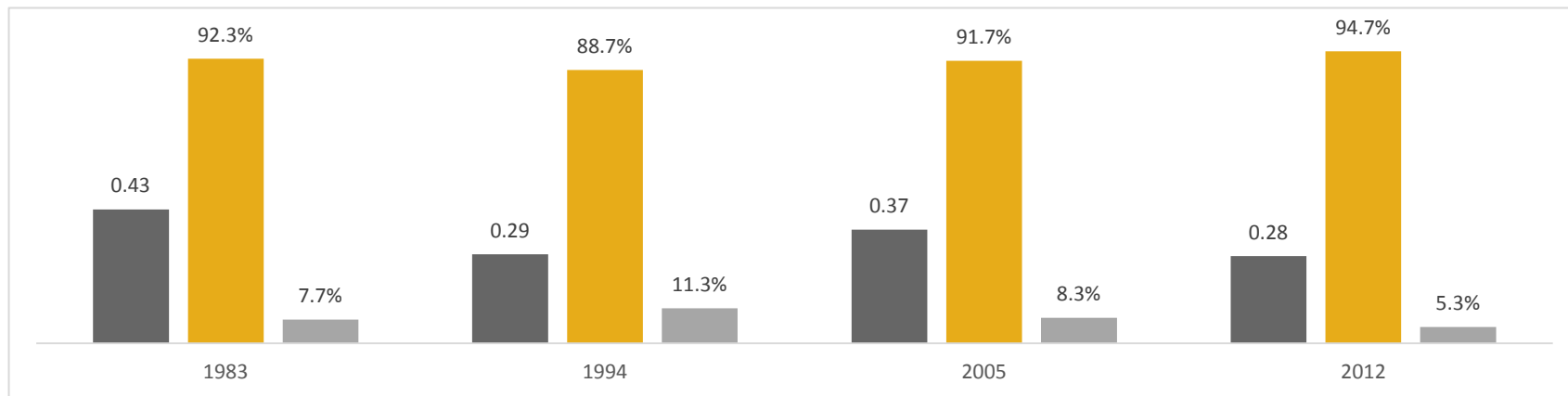


## Urban

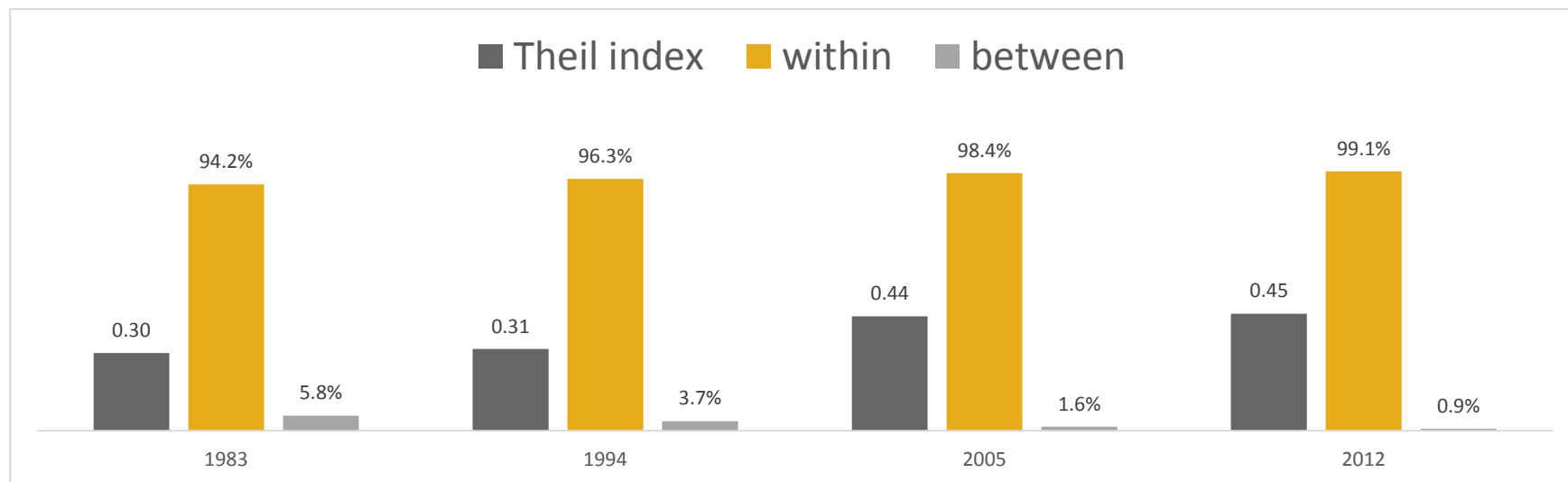


# Decomposition across gender (within and between) - India

## Rural



## Urban



**Social group/race and wage  
inequality**



## Work in progress

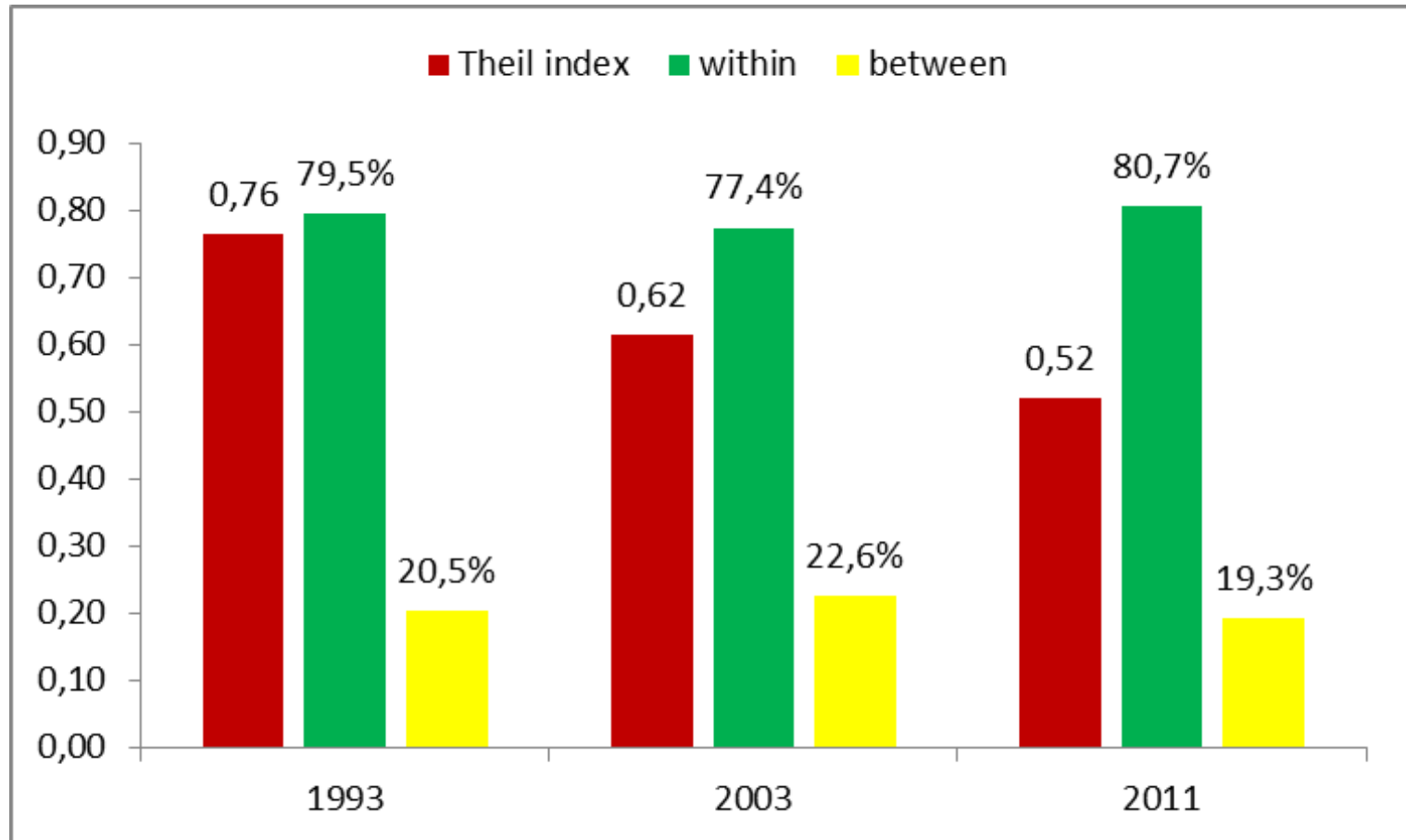
- Social groups in India – scheduled caste, scheduled tribe, other backward classes, other caste.
- Race in Brazil – white, black, color, yellow, indigenous
- Social groups and race plays an important role in labor market access and compensation in India and Brazil respectively.

## **Work type and wage inequality**

# Ratio of labour income in Brazil: registered to non-registered workers |

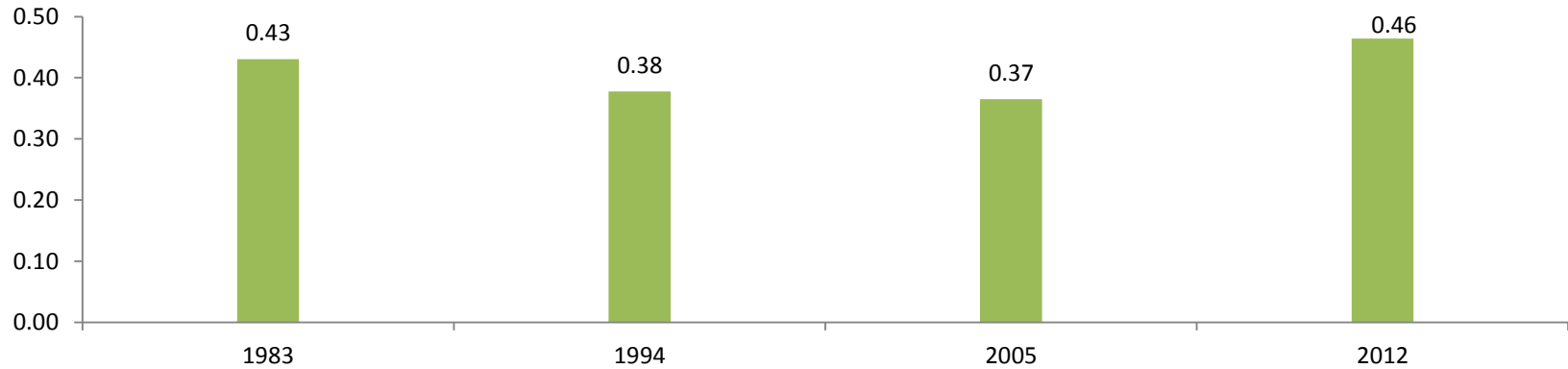


# Decomposition across work type (within and between) - Brazil

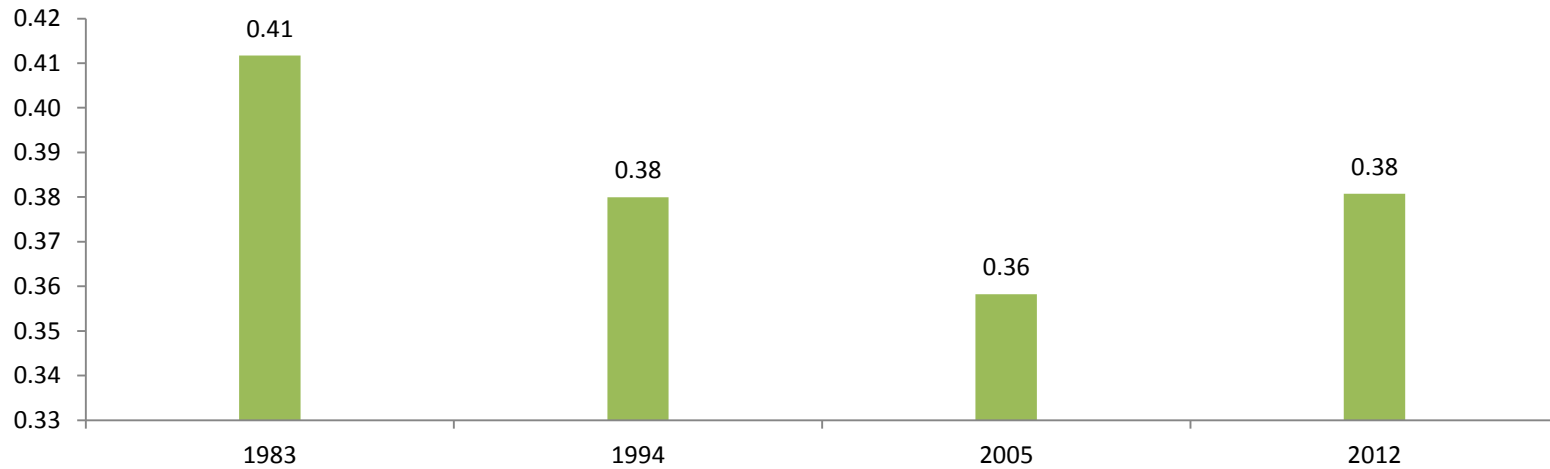


# Ratio of wage in India: regular to casual workers

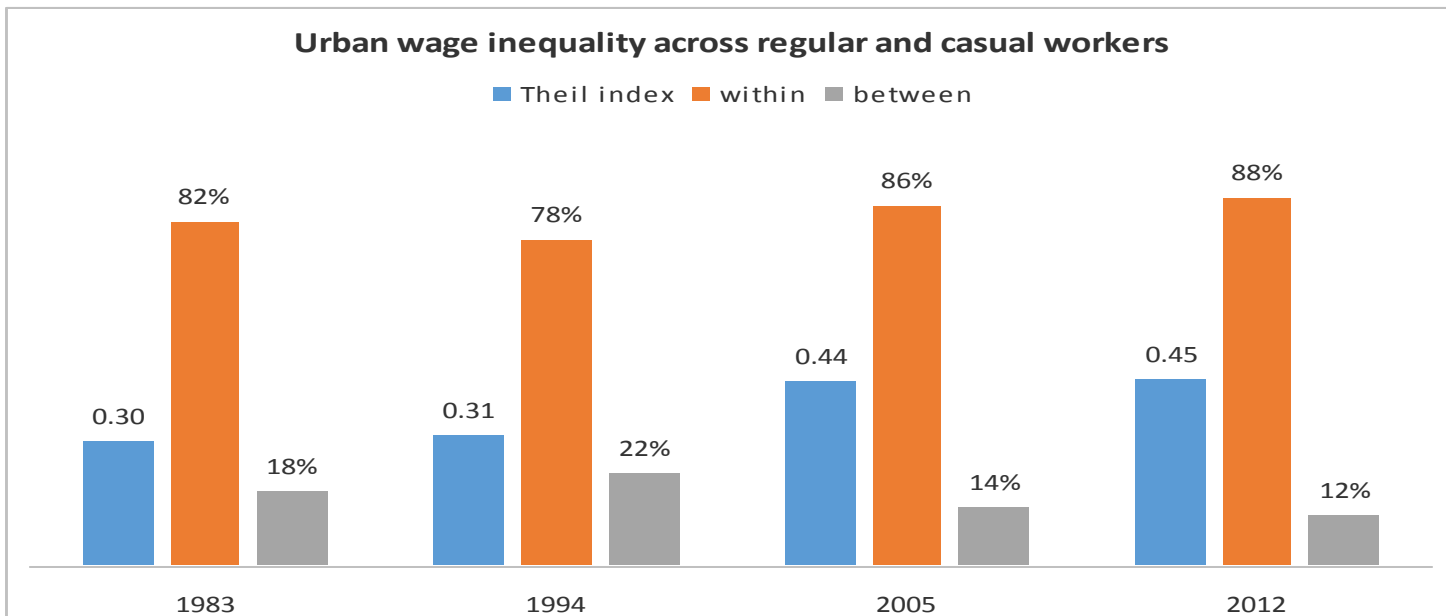
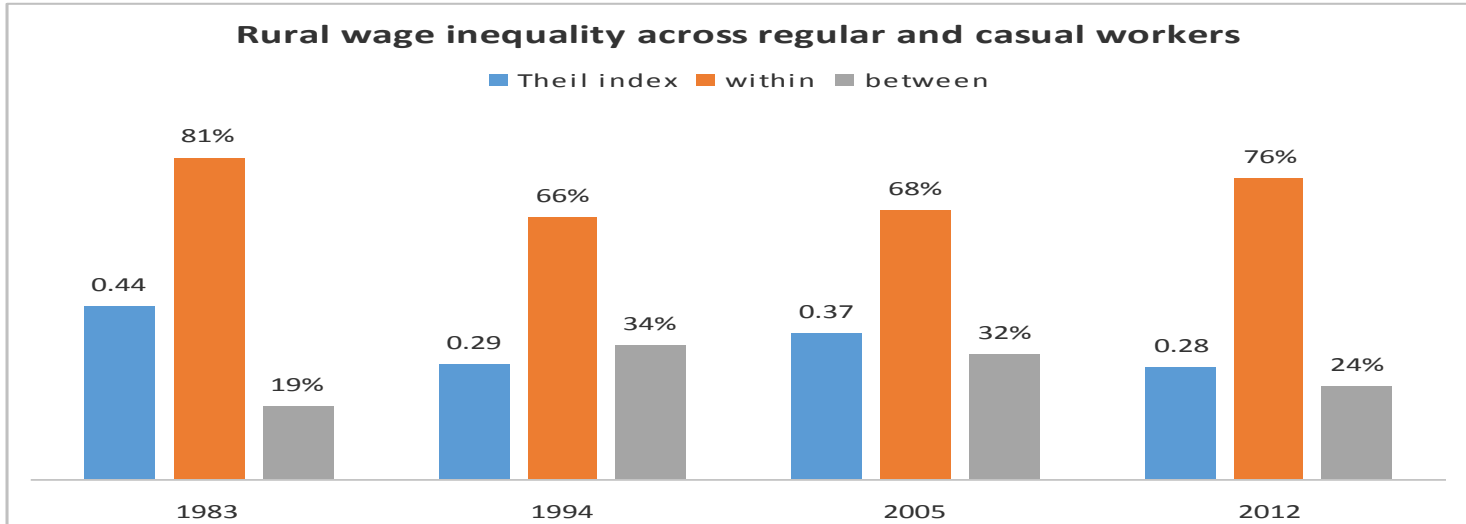
## Rural



## Urban

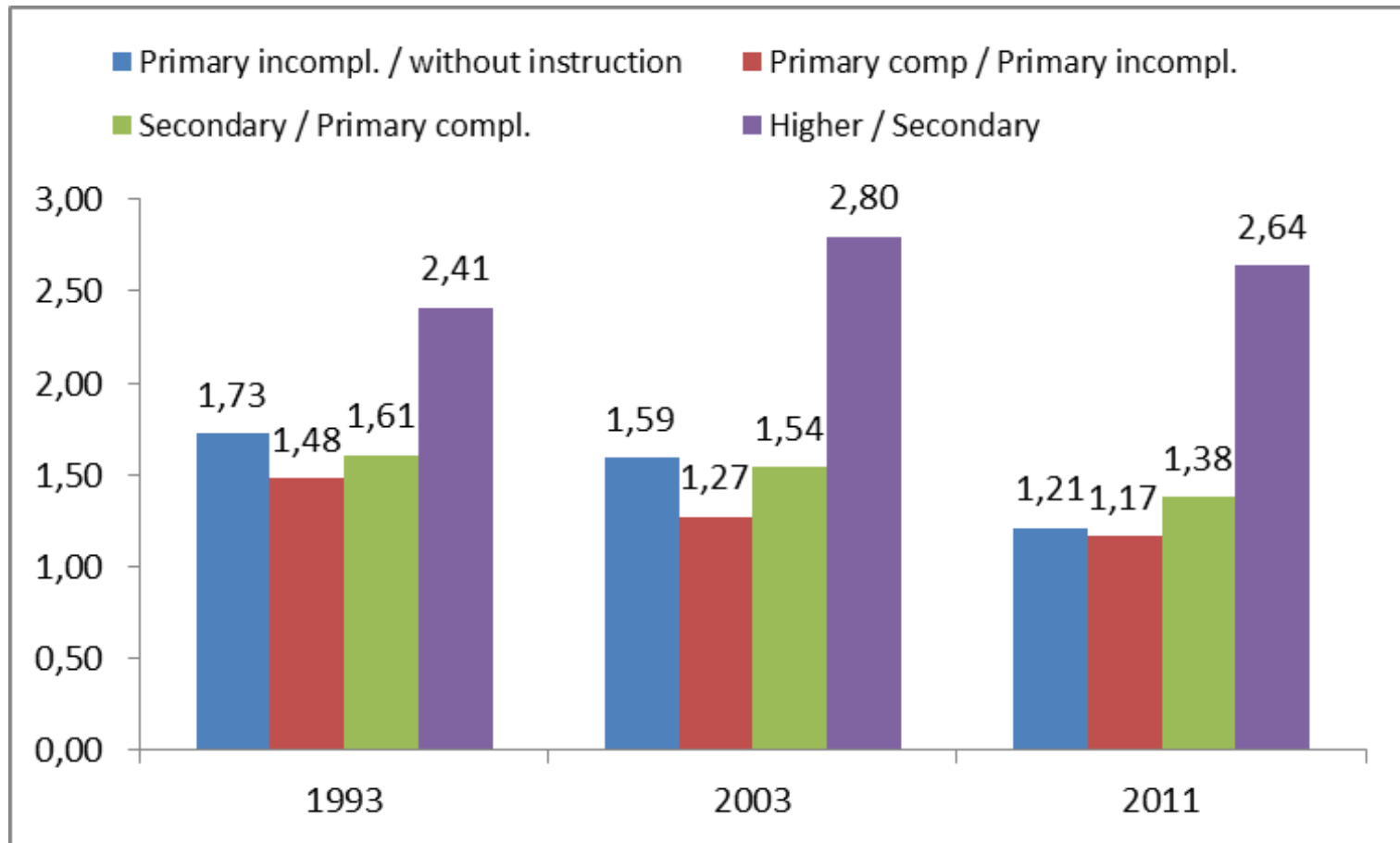


# Decomposition across work type (within and between) - India



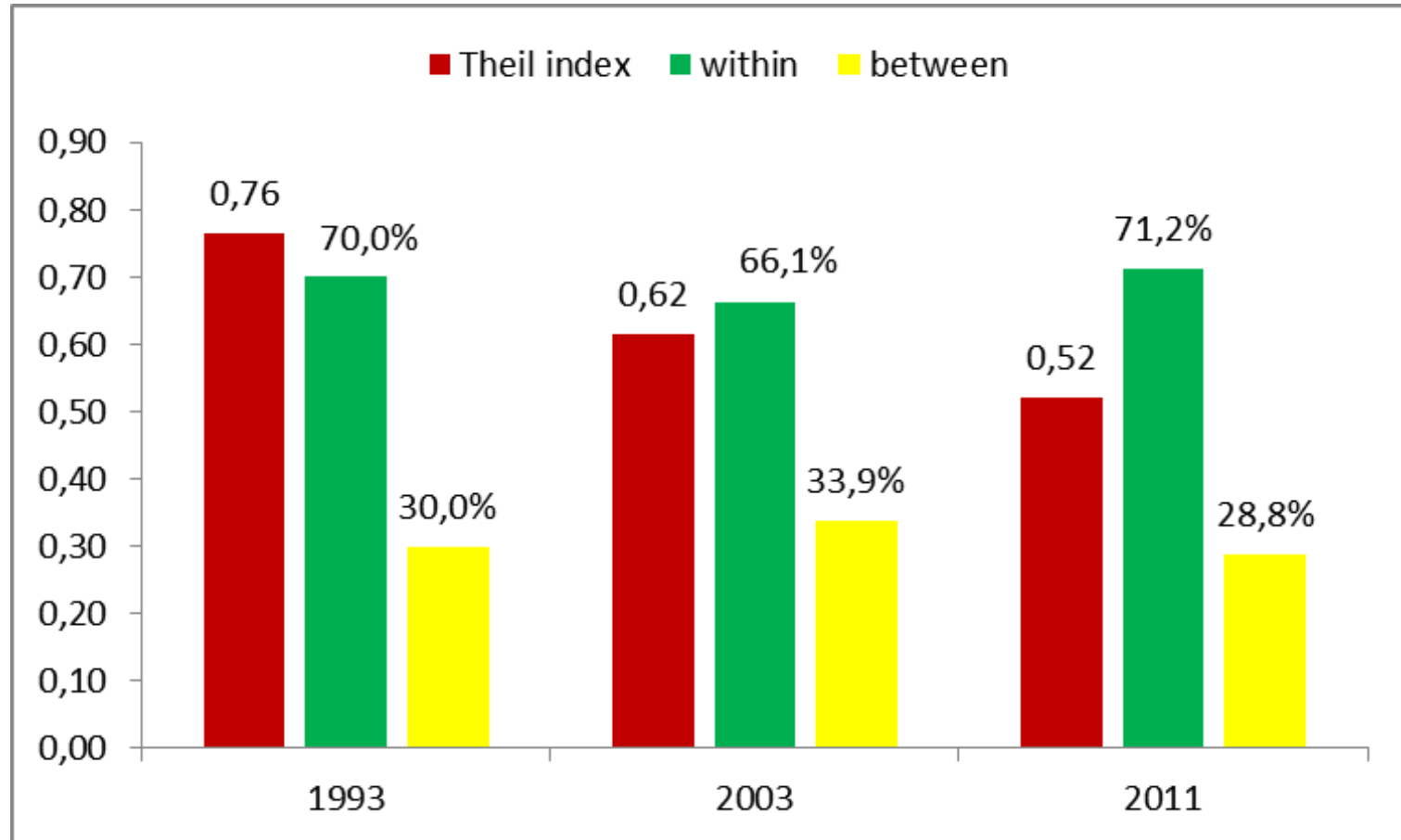
# **Education and wage inequality**

# Ratio of labour income in Brazil: education

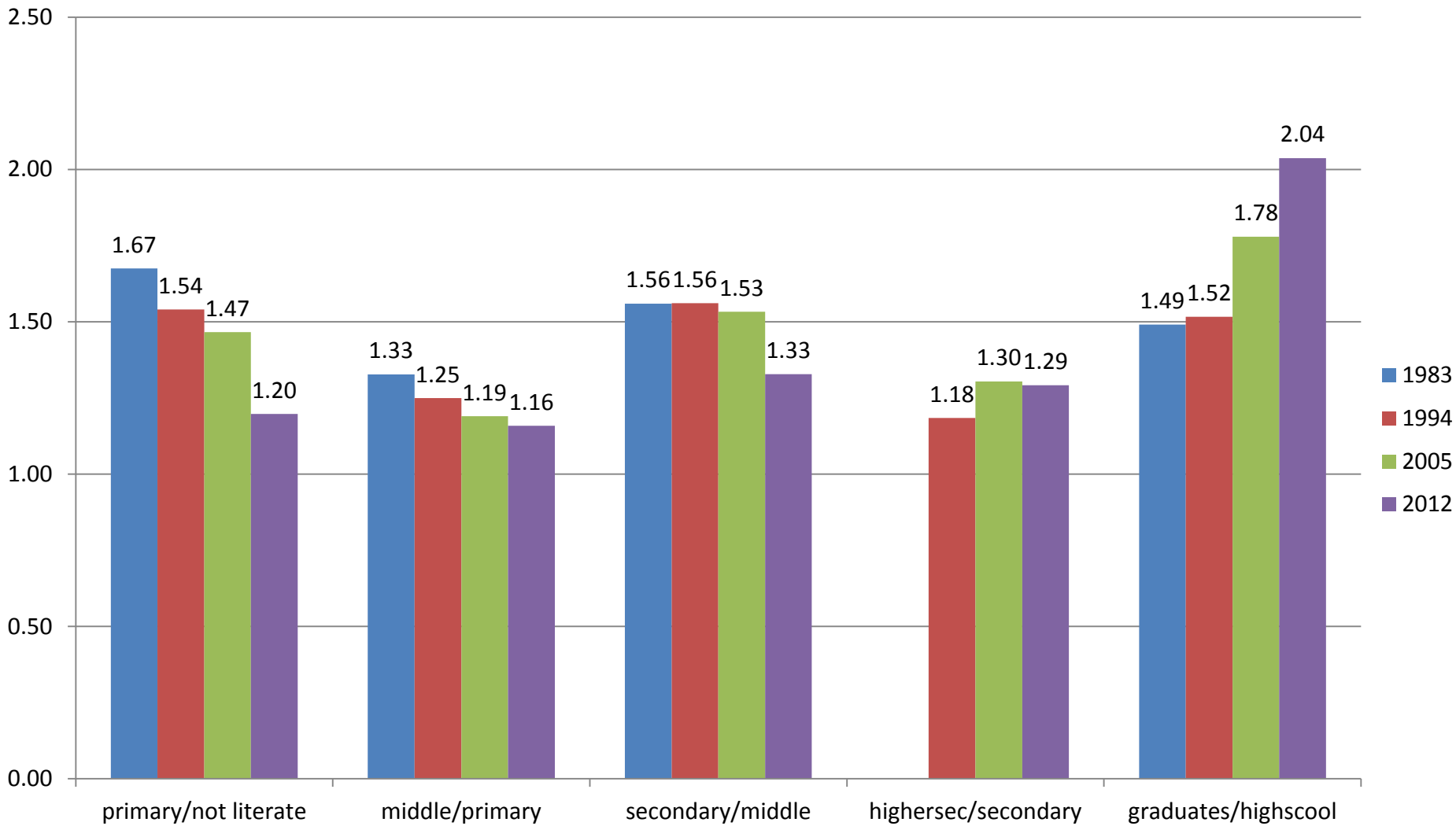




# Decomposition across education (within and between) - Brazil

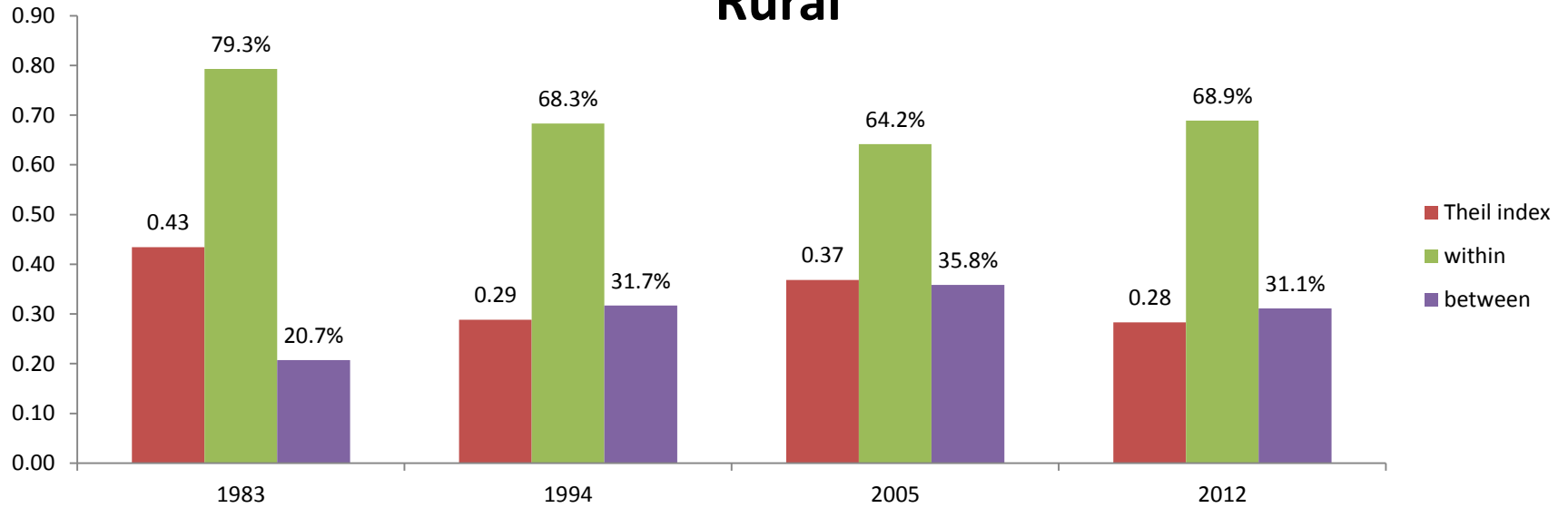


# Ratio of wage in India: education

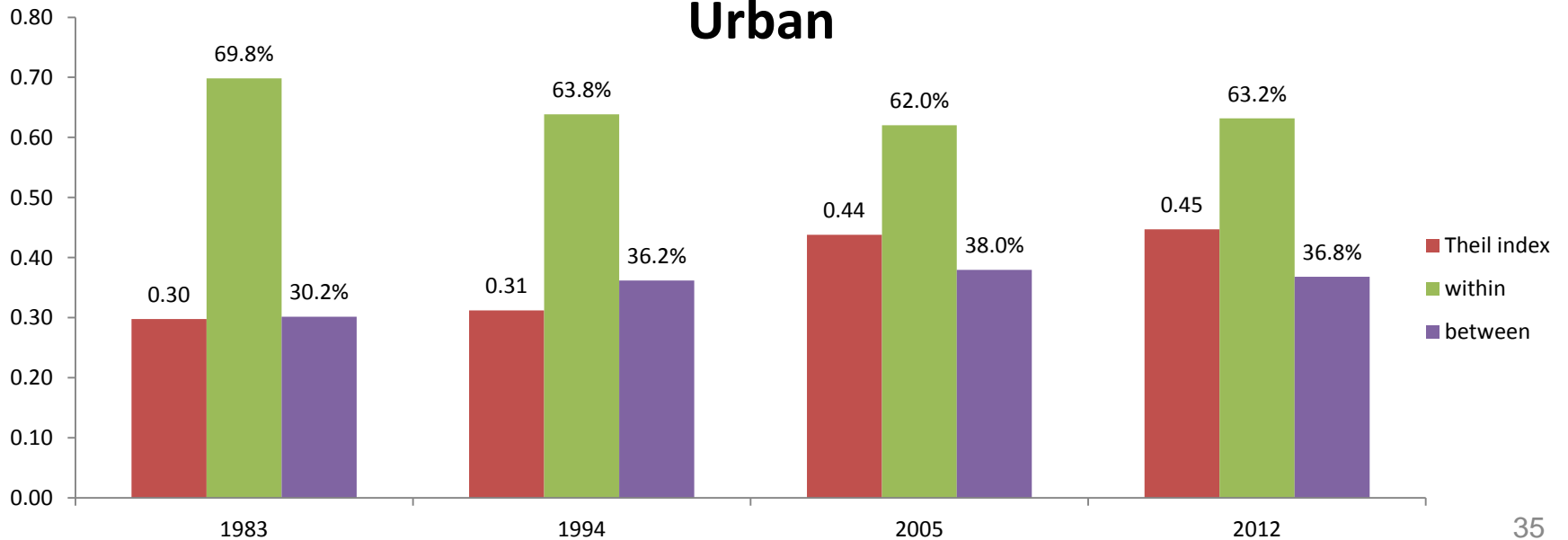


# Decomposition across education attainment (within and between) - India

## Rural

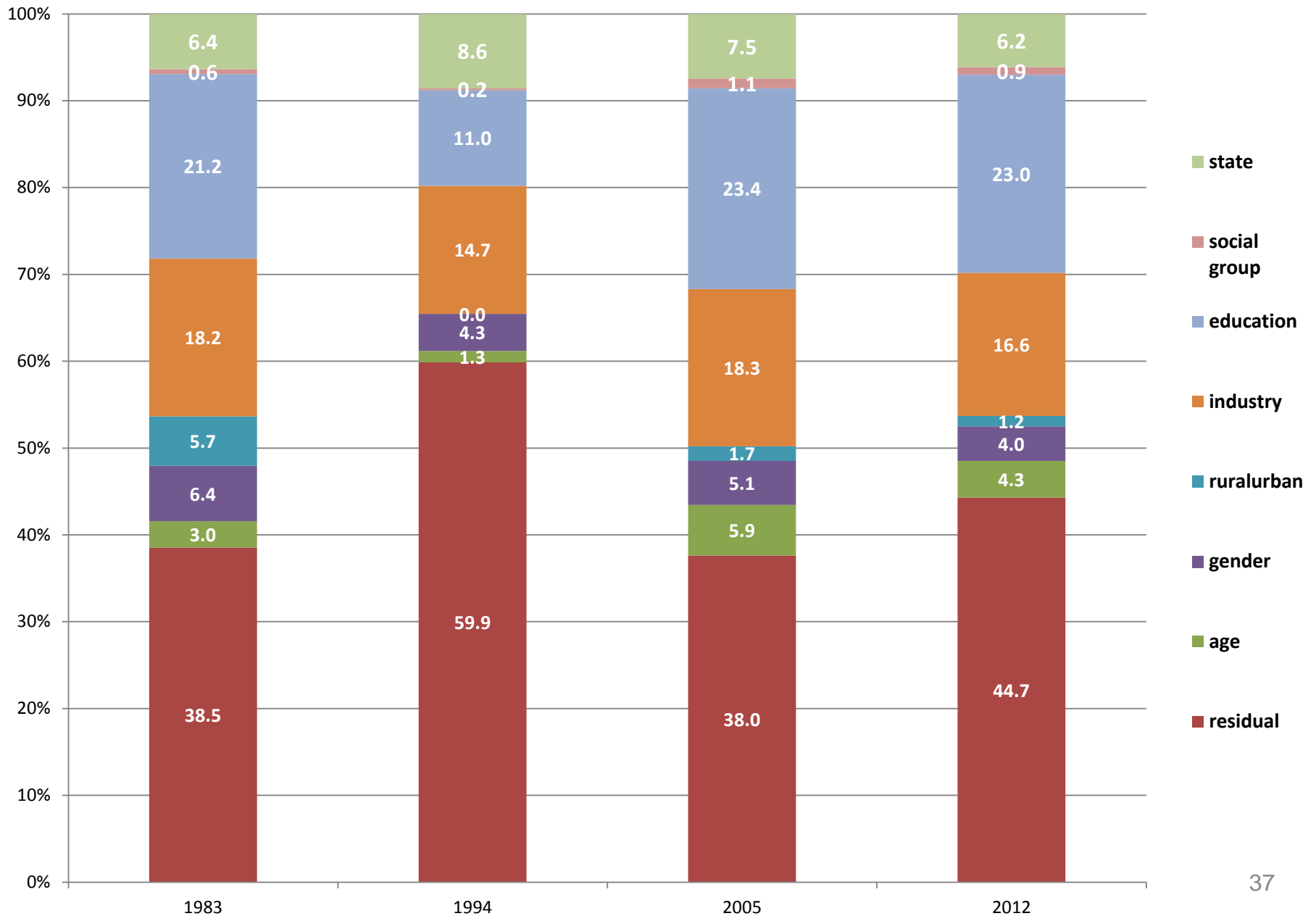


## Urban



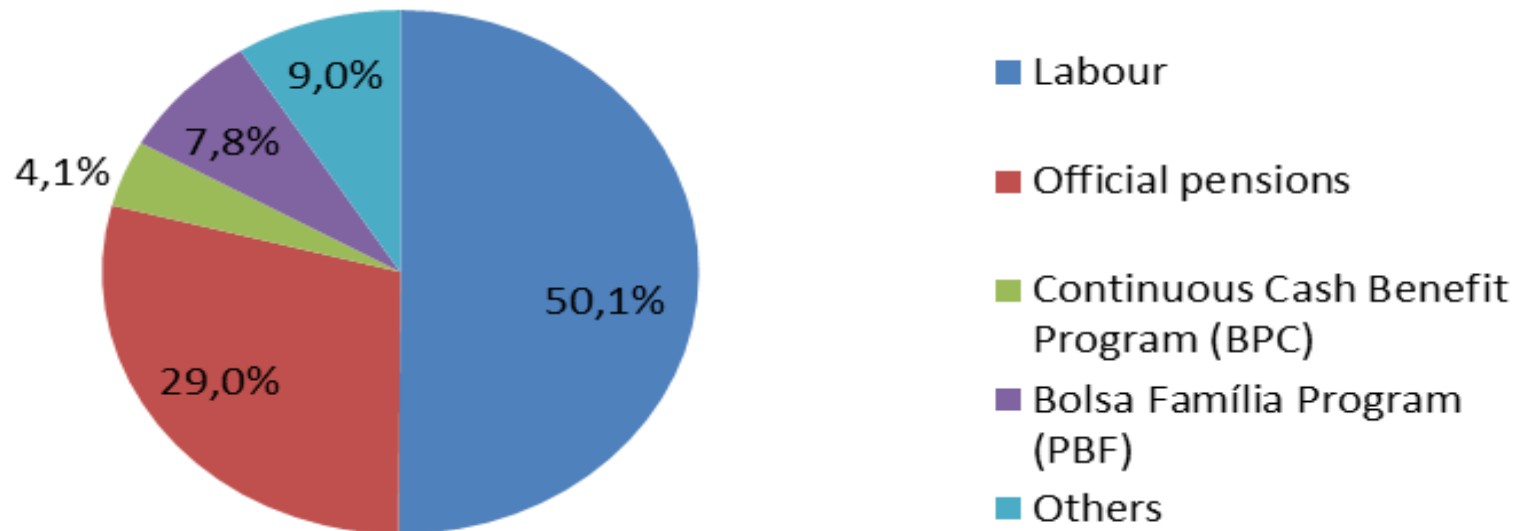
# **MULTIVARIATE ANALYSIS**

# Fields decomposition of wages (India)



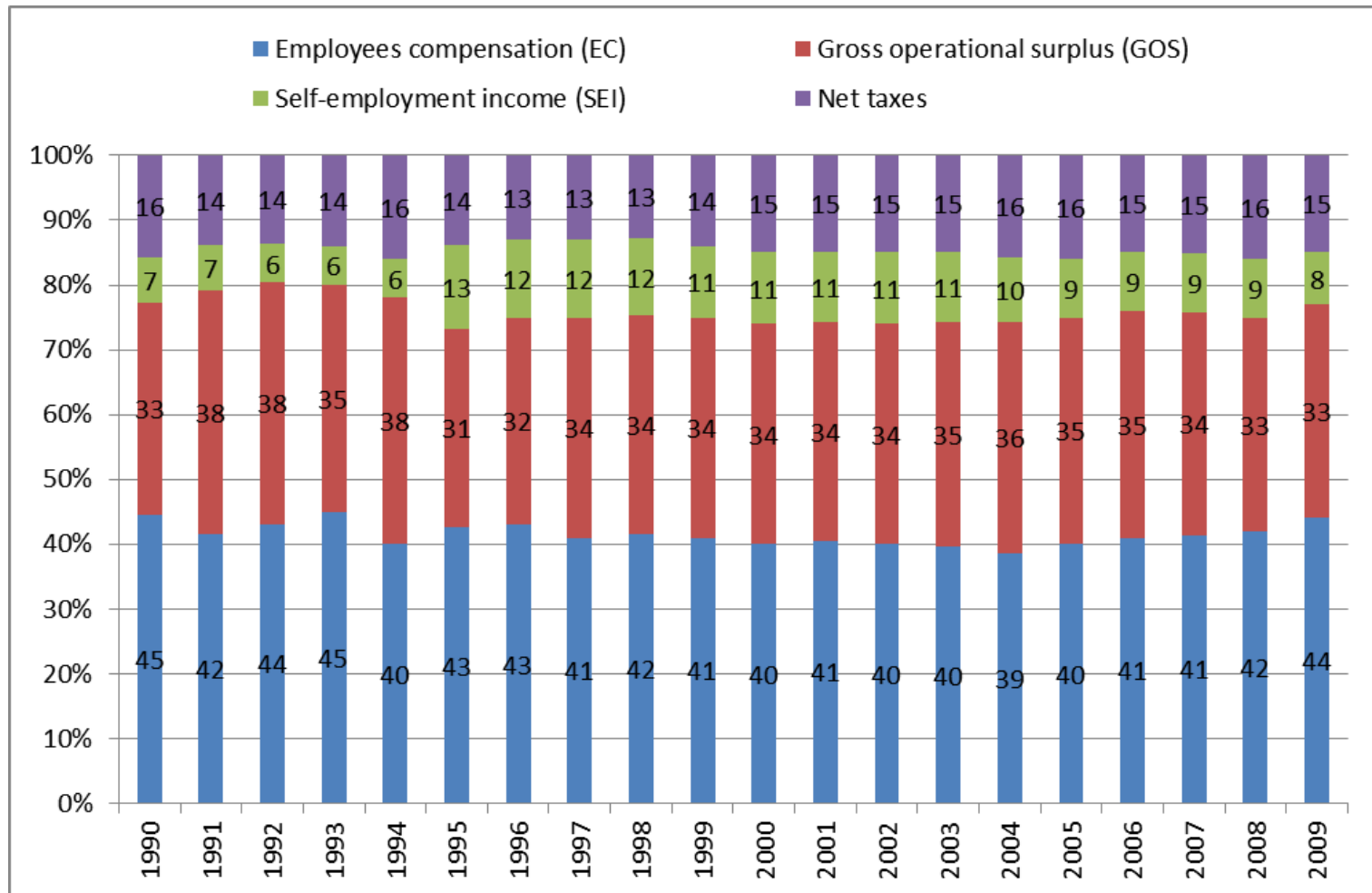
# Factorial decomposition of Gini (Brazil)

**Contribution of each source of income on the Gini variation over 2003/2011**



# **FUNCTIONAL DISTRIBUTION OF INCOME**

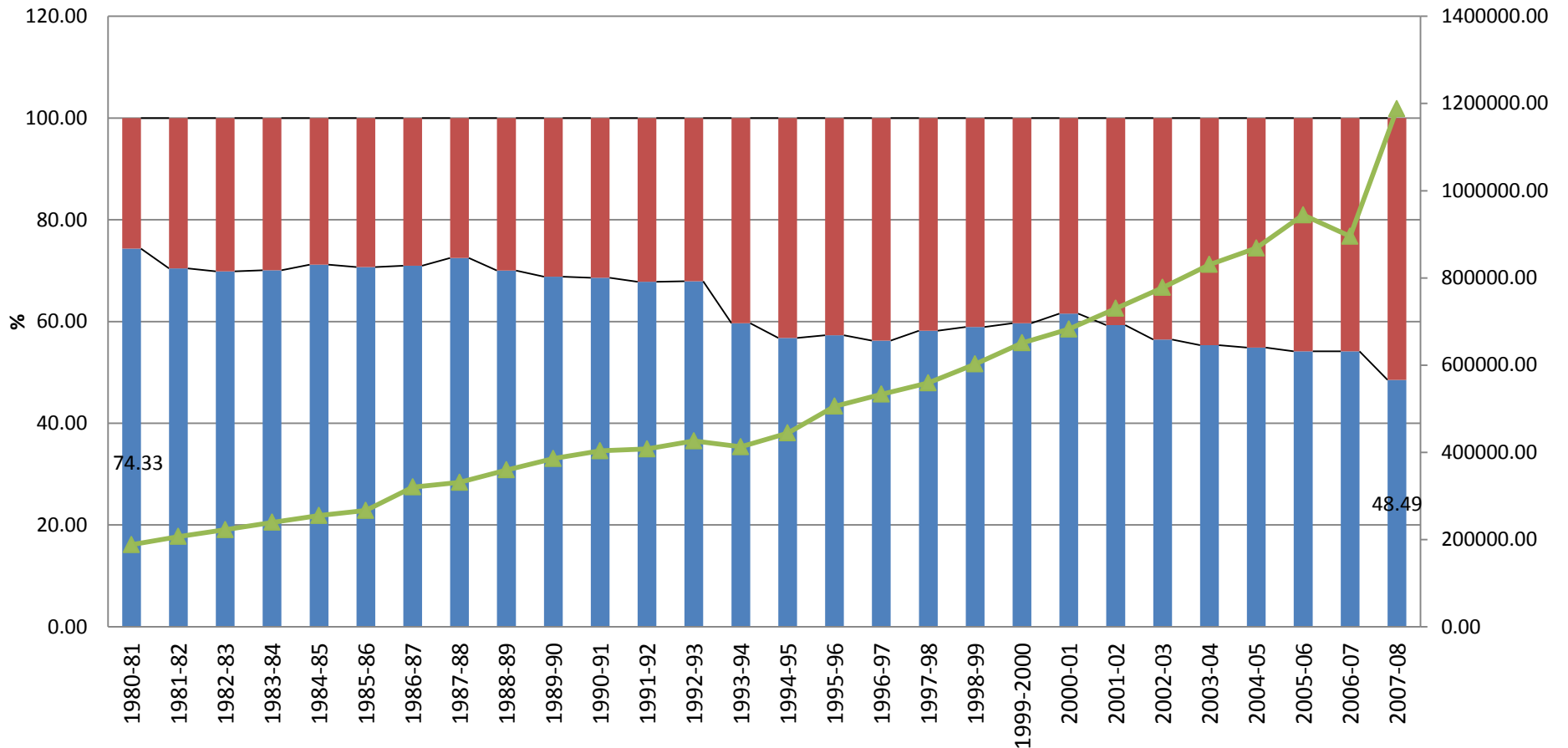
# Share of factors in income – Brazil





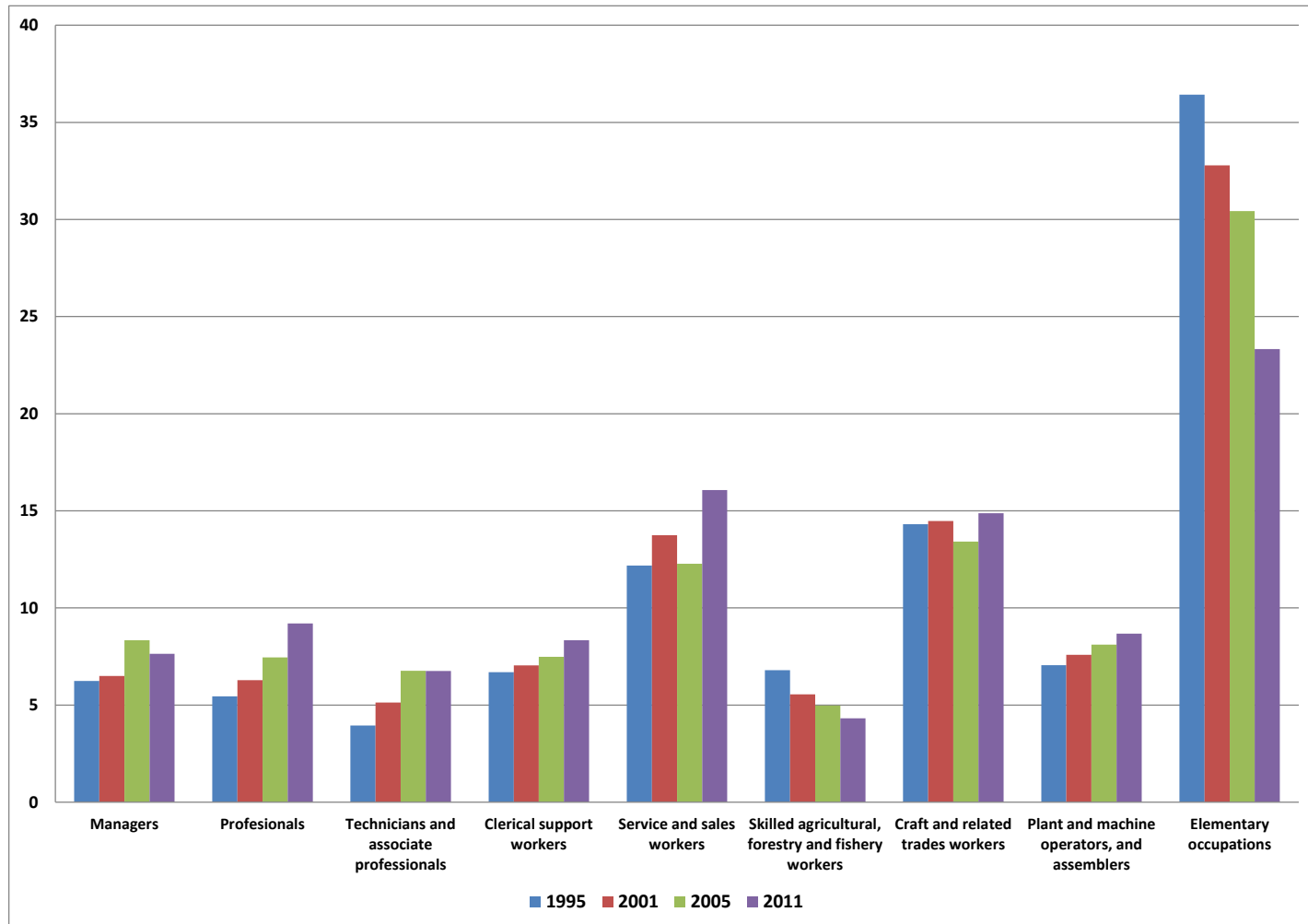
# Share of factors in income in the organized sector – India

- Operating surplus
- compensation
- Net Domestic Product:Organised Sector (1999-00 prices):value (crores)



# **SHIFTS IN THE OCCUPATIONAL AND CLASS STRUCTURES**

# Occupational Structure in Brazil – 1995-2011



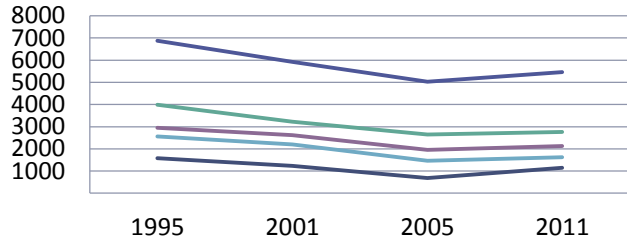
Diversification of occupational structure, with a very high decrease of the elementary occupations' share

# Occupational Structure in Brazil – 1995-2011

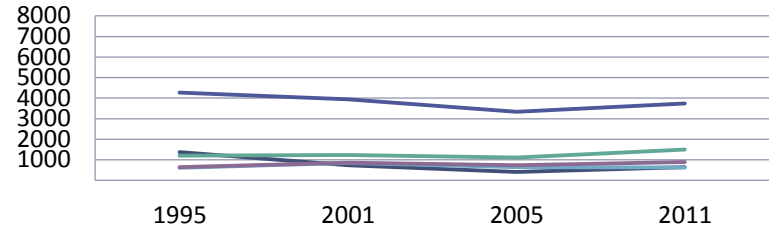
Occupational structure; Brazil, 1995-2011	1995			2005			2001			2011		
	\$ Average	\$ Relative	CV	\$ Average	\$ Relative	CV	\$ Average	\$ Relative	CV	\$ Average	\$ Relative	CV
Managers	3911,87	3,11	1,24	3445,08	2,94	1,40	2599,93	2,36	1,76	2962,94	2,14	1,60
Profesionals	2749,12	2,18	1,38	2725,79	2,33	1,30	2391,78	2,17	1,31	2875,74	2,07	1,36
Technicians and associate professionals	2220,65	1,76	1,21	1930,27	1,65	1,18	1729,61	1,57	1,11	2022,70	1,46	1,40
Clerical support workers	1324,34	1,05	1,02	1145,39	,98	0,94	976,05	,88	0,93	1176,58	,85	0,96
Service and sales workers	1033,01	,82	1,35	931,50	,79	1,41	716,25	,65	0,99	925,27	,67	0,93
Skilled agricultural, forestry and fishery workers	574,49	,46	2,46	512,59	,44	1,85	510,42	,46	1,71	710,22	,51	2,29
Craft and related trades workers	974,67	,77	0,99	829,29	,71	0,93	811,08	,74	0,88	1106,82	,80	0,92
Plant and machine operators, and assemblers	1212,42	,96	0,95	1075,18	,92	0,88	989,18	,90	0,94	1240,99	,89	0,87
Elementary occupations	530,29	,42	1,43	507,82	,43	1,10	477,16	,43	0,77	661,00	,48	0,79
Média	1259,00	1,00	1,74	1172,00	1,00	1,75	1103,00	1,00	1,79	1387,00	1,00	1,64

Source: PNAD. Monetary values deflated to the year 2012, excluding workers with incomes equal to zero.

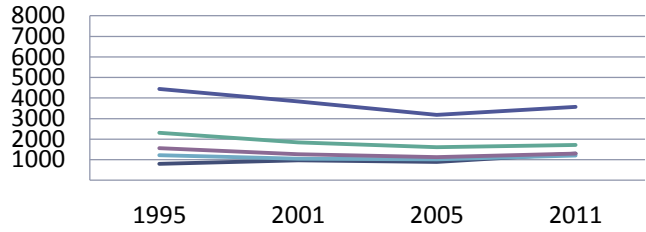
**Managers**



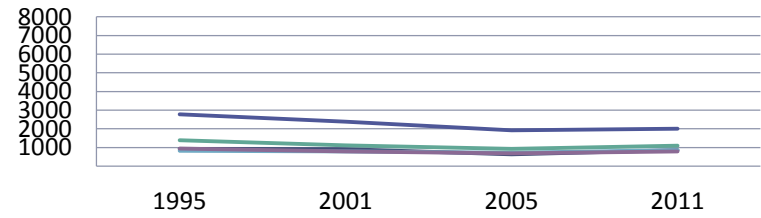
**Profesionals**



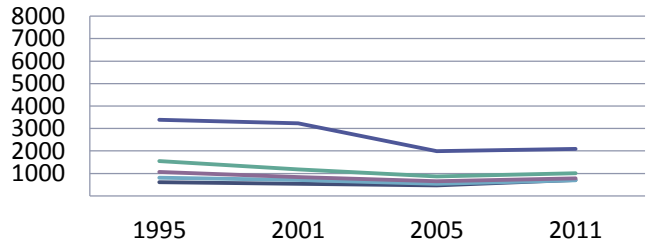
**Technicians and associate professionals**



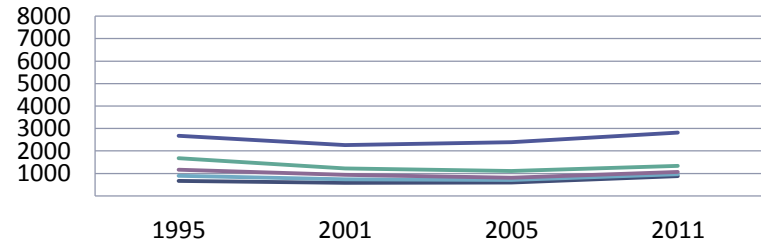
**Clerical support workers**



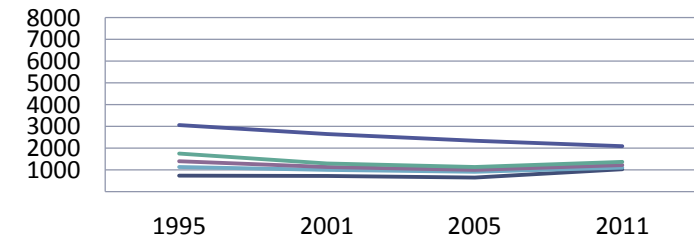
**Service and sales workers**



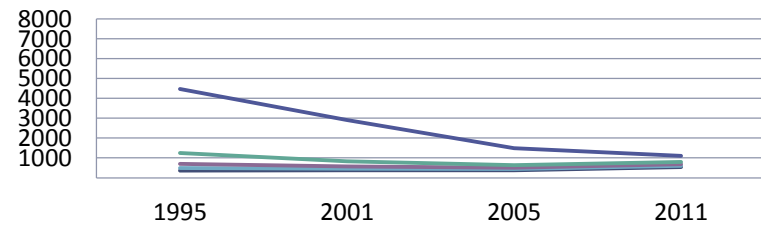
**Craft and related trades workers**



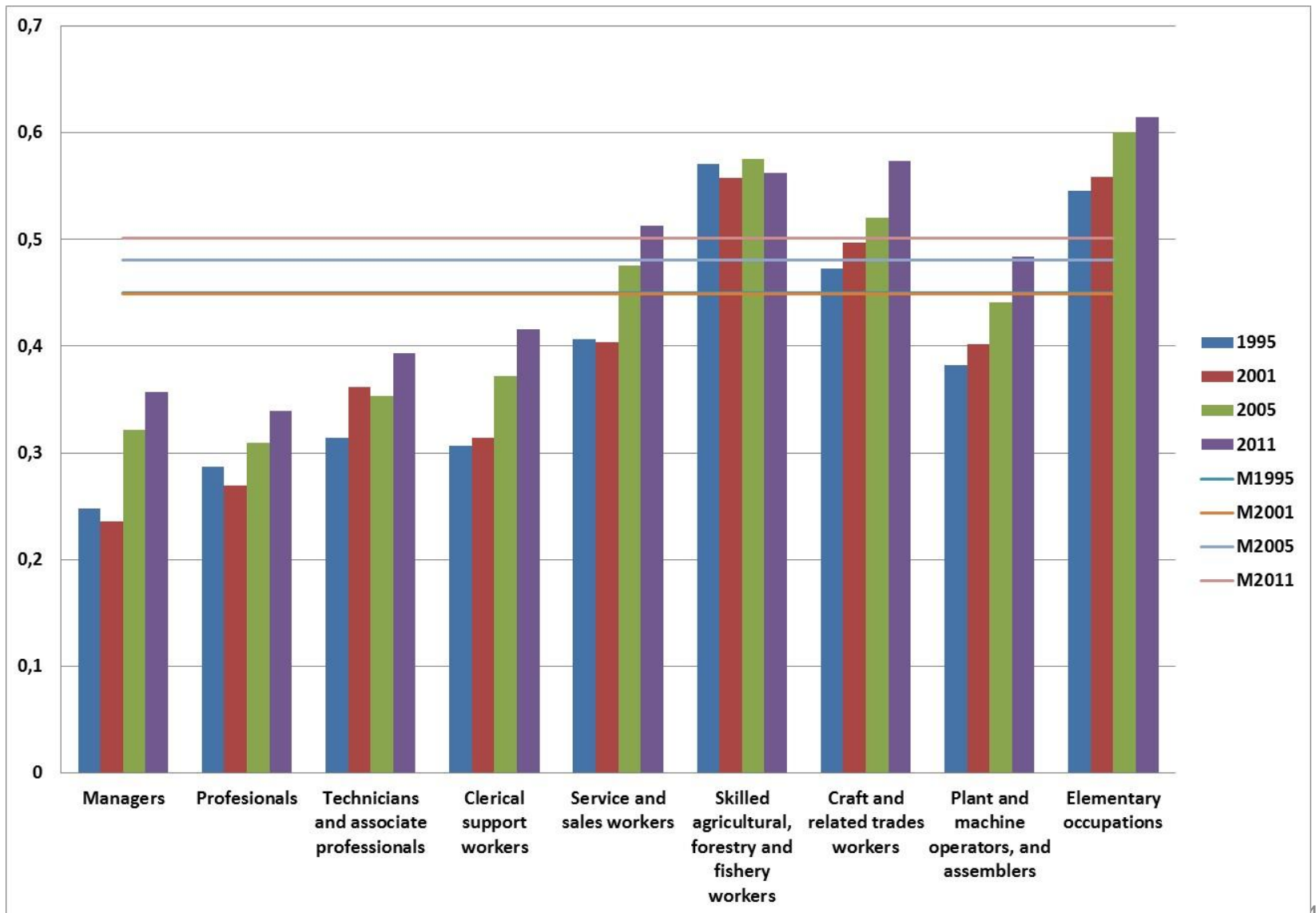
**Plant and machine operators, and assemblers**



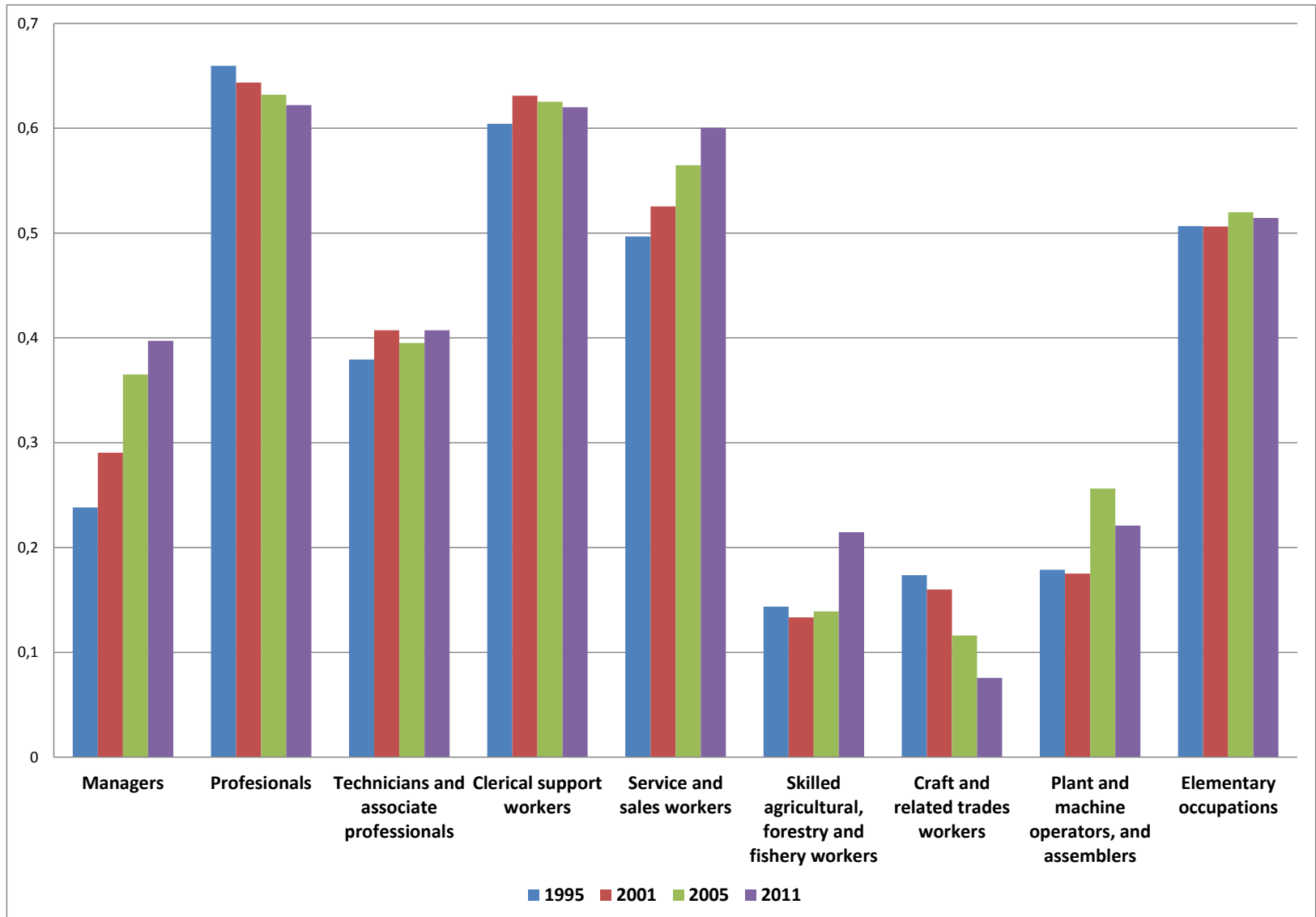
**Elementary occupations**



# Proportion of blacks within the occupational groups (columns) and proportion of employed blacks (lines); Brazil, 1995 – 2011



# Proportion of women within the occupational groups; Brazil, 1995-2011



# Discussion of the results

- Fall in labor income inequality in Brazil (in many categories, especially in the 2000s)
- Rise in urban wage inequality in India
- Rural wage inequality rises after 1994, but falls between 2005 to 2012, owing to successful rural public programs.
- Gender differentials fall in India and Brazil



# Discussion of the results: continued

- Registered to non-registered wage ratio fall in Brazil
- Regular to casual wage ratio initially fall and rise again in India.
- In India, premium to higher education compared to high school is increasing but premium to primary and middle school is falling, which is a similar pattern for Brazil.

# Discussion of the results: continued

- Diversification of occupational structure in Brazil.
- Strong reduction of “elementary occupations” (even though it’s share is still around 25% of overall occupations)
- Rise in the share of woman and black/colored workers in all occupational groups...
- but still with a strong concentration in the basis of the distribution