

Income Inequality and Labor Market Dynamics in Brazil

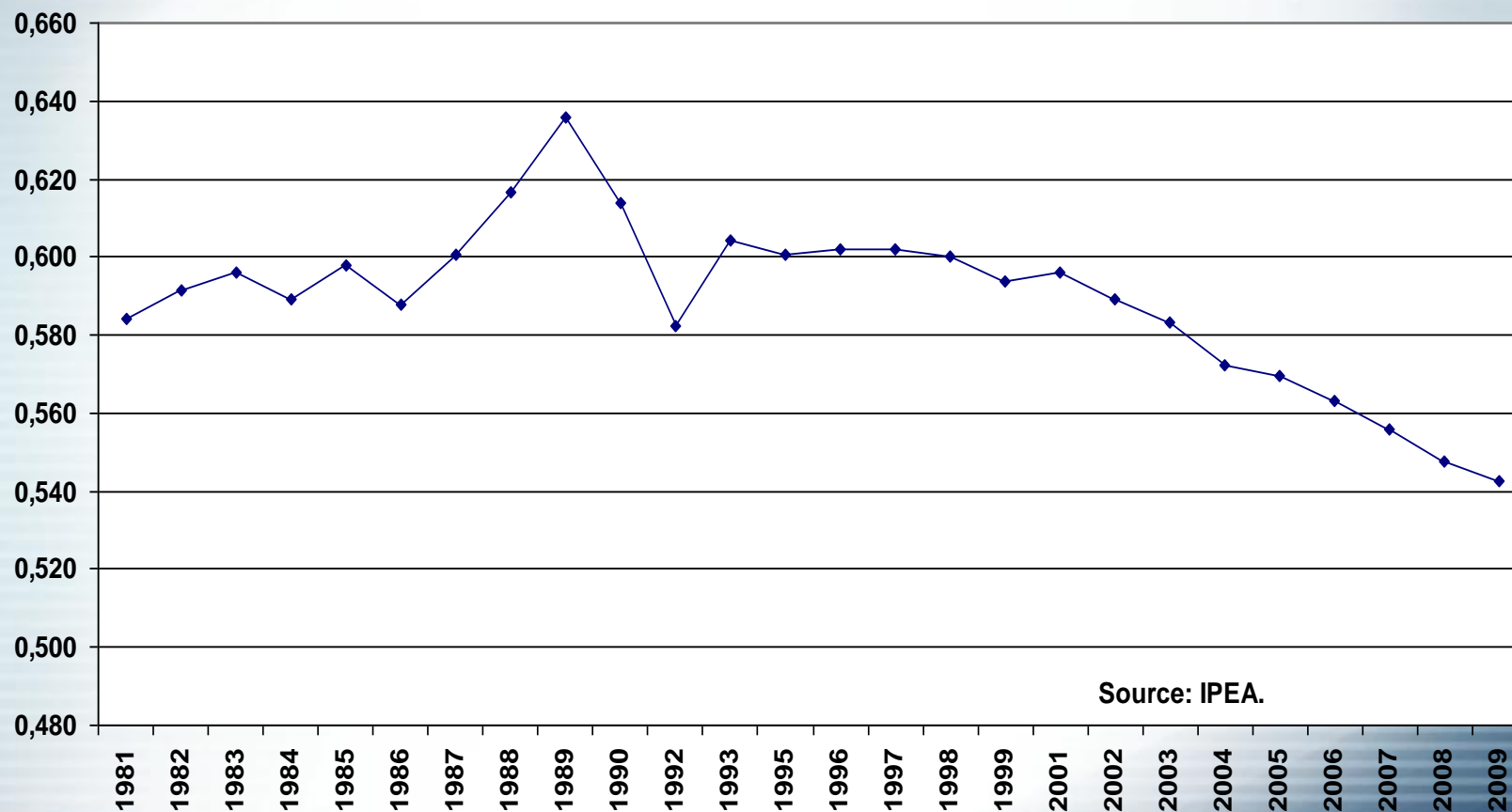
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- Income inequality declined in Brazil over the last decade.
- Several factors explain this drop:
 - 1 - Minimum wage real gains policy
 - 2 – Bolsa Família (Family Grant)
 - 3 – Education Attainment improvement
 - 4 – New Labor Market Dynamics
- Brazilian macroeconomic environment became more stable: credit market is booming.

Figure 1: Gini Index



A large, dark blue, 3D-style arrow pointing downwards and to the right, located on the left side of the slide.

Minimum Wage Increase

- Barros et al (2000) show that minimum wage increases reduced inequality.
- Firpo and Reis (2007) show that increases in minimum wage were more important for inequality reduction in periods of high inflation.

Minimum Wage Increase

Table 1: Minimum Wage (MW) and Average Wage Evolution

	Nominal MW	Real MW	Real AW	MW/AW
1995	100.00	288.25	1250.36	23.1%
1996	112.00	284.13	1279.23	22.2%
1997	120.00	291.76	1267.65	23.0%
1998	130.00	305.75	1254.42	24.4%
1999	136.00	302.86	1169.35	25.9%
2000	151.00	314.26	0.00	28.1%
2001	180.00	349.14	1154.90	30.2%
2002	200.00	354.71	1128.77	31.4%
2003	240.00	362.19	1044.50	34.7%
2004	260.00	369.13	1035.93	35.6%
2005	300.00	405.64	1082.81	37.5%
2006	350.00	459.46	1158.84	39.6%
2007	380.00	475.09	1194.72	39.8%
2008	415.00	484.90	1210.60	40.1%
2009	465.00	522.43	1242.31	42.1%
2010	510.00	545.70		
2011	545.00	545.00		
2001 - 2009 Variation				
	158.3%	49.6%	7.6%	39.4%

Source: Self made with PNAD data.

Minimum Wage Increase

- Barros and Carvalho (2005) argue that minimum wage increases are not cost effective in reducing inequality.
- Soares (2006) and Barros (2007) use household data to show that BF is more effective in reducing inequality than raising minimum wage.
- Sabóia (2007) finds that the effect of minimum wages on poverty reduction is small.
- Afonso, Pereda, Giambiagi and Franco (2011) argue that the minimum wage is no longer a cost effective way to reduce extreme poverty.
- Neri (2010) also indicates that the government should use target social programs, such as BF to further reduce inequality.

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Bolsa Família

- The most important conditionality is the requirement to keep children at school.
- BF benefited 6.5 million families in 2004.
- In 2011, it benefited 13.3 million families.

- BF is a cost effective program. An increase of R\$1 minimum wage increase costs around R\$300 million, while giving the same R\$1 increase to BF recipients would cost 13.3 million reais.

Table 2: Number of Bolsa Família Benefits, average Value and Minimum Wage

	Number of BF Beneficiaries	Average Value of Benefit	BF as % GDP	Minimum Wage
2004	6.571.839	67	0.3%	260
2005	8.700.445	63	0.3%	300
2006	10.965.810	63	0.3%	350
2007	11.043.076	75	0.4%	380
2008	10.557.996	86	0.4%	415
2009	12.370.915	95	0.4%	465
2010	12.778.220	97	0.4%	510
2011	13.352.306	120	0.5%	545

Source: IPEA and Ministério do Desenvolvimento Social e Combate à Fome (MDS)

Labor Market Dynamics

- GDP growth accelerated from 2003 to 2010.

Table 3: Brazil's GDP Growth Rate

1995-1998	2.5%
1999-2002	2.1%
2003-2006	3.4%
2007-2010	4.5%

Source: IBGE.

- Higher economic growth raised employment levels.

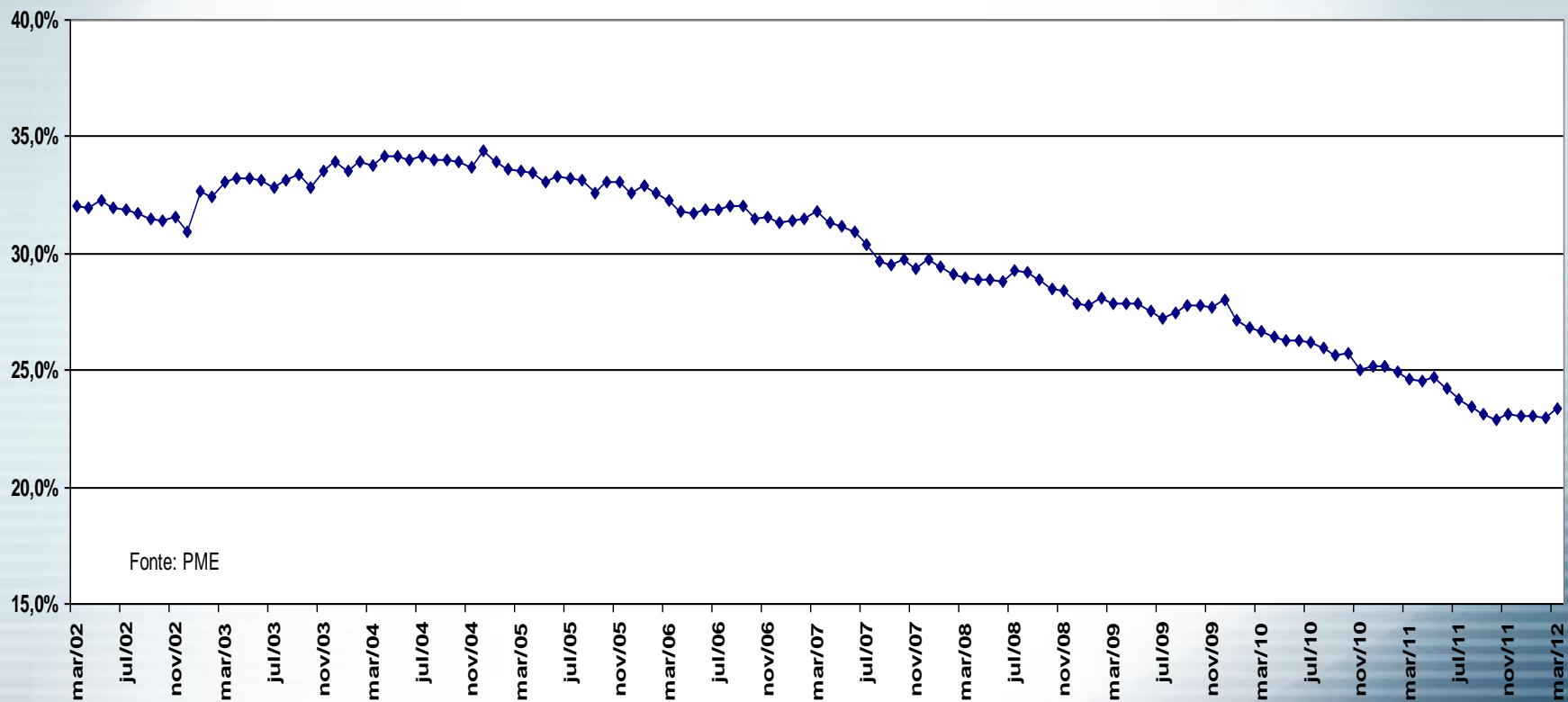
Labor Market Dynamics

Figure 2: Unemployment Rate



Labor Market Dynamics

Figure 3: Informality Rate



Labor Market Dynamics

- Increase in Educational Attainment

Table 4: Labor Force by Education Group

Schooling Years	2002	2009
0-3	23.3%	16.3%
4-7	29.0%	23.1%
8-10	16.4%	17.0%
11-14	23.5%	33.0%
>15	7.8%	10.6%
Total	86,335,873	101,110,213

Source: Barbosa Filho and Pessôa (2011)

Labor Market Dynamics

- Impact of Education on the Average Wage

Table 5: Employment by Educational Group, Average wage and counter factual Average Wage

	2002			2009				
	Emp (%)	RW	RW/AW (%)	Emp (%)	RW	RW/AW (%)	2002 Emp(%)	RW/AW (%)
0-3	24	473	45	17	565	47	565	52
4-7	29	698	67	23	935	78	935	86
8-10	16	844	81	16	859	71	859	79
11-14	23	1336	128	33	1235	102	1235	114
>15	8	3489	335	11	3192	264	3192	294
AW		1042			1207		1087	

Source: Author's calculations using PNAD data.

- Of the 15.8% real mean wage increase between 2002 and 2009, 4.3 p.p. were due to higher real wages and 11.5 p.p. stemmed from changes in the educational composition of the labor force.

Labor Market Dynamics

Table 6: Labor Market Transition Matrix

2002					
	Informal	Formal	Unemployed	Out of Labor Force	Total
Informal	68.1	21.1	3.2	7.6	100.0
Formal	5.1	89.3	1.2	4.3	100.0
Unemployed	7.1	8.6	53.7	30.7	100.0
Out of Labor Force	1.9	3.4	4.3	90.4	100.0
Total	10.2	38.4	6.2	45.3	100.0
2011					
	Informal	Formal	Unemployed	Out of Labor Force	Total
Informal	66.6	23.0	2.0	8.4	100.0
Formal	4.2	91.0	0.8	4.0	100.0
Unemployed	7.3	13.2	47.0	32.6	100.0
Out of Labor Force	1.9	3.8	2.7	91.6	100.0
Total	8.9	44.3	3.3	43.5	100.0
Change between 2002 and 2011					
	Informal	Formal	Unemployed	Out of Labor Force	Total
Informal	-1.6	1.9	-1.2	0.8	0.0
Formal	-0.9	1.7	-0.4	-0.4	0.0
Unemployed	0.2	4.6	-6.7	1.9	0.0
Out of Labor Force	0.0	0.4	-1.6	1.2	0.0

Source: Barbosa Filho and Moura (2012).

Beneficiaries Groups

- Unemployment Reduction was higher for high unemployment rate groups.
- It benefited the most the “marginal workers”.
- In 2009, unemployment increase was also higher for “marginal workers”.

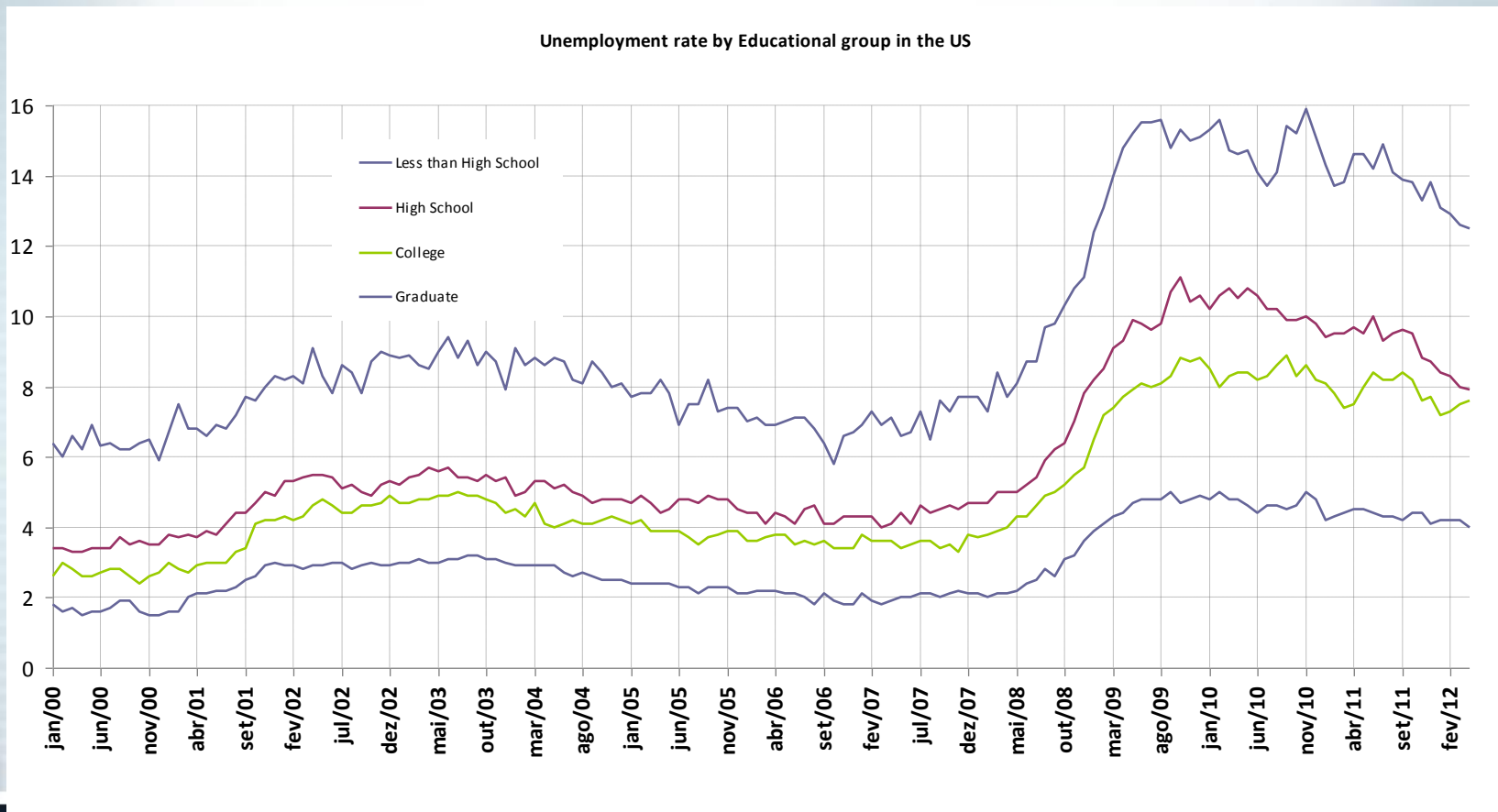
Table 7: Unemployment by Education Group

	2002	2008	2009
1	5,5%	4,2%	5,0%
4	9,6%	6,3%	7,8%
8	13,8%	10,7%	12,2%
11	10,4%	8,4%	9,7%
15	4,6%	4,0%	4,1%

Source: Barbosa Filho and Pessôa (2011)

Digression

- “Marginal workers” are usually the most affected by macroeconomic shocks.



Beneficiaries

- The decline in Informality was particularly important for highly educated workers .

Table 8: Informality by Education Group

	2002	2008	2009
0-3	62.8%	59.7%	59.1%
4-7	50.4%	47.9%	48.7%
8-10	42.1%	42.1%	41.9%
11-14	28.7%	25.4%	24.7%
>15	26.1%	24.5%	23.4%

Source: Barbosa Filho and Moura (2012)

- Barbosa Filho and Moura (2012) show that almost 60% of the drop in informality between 2002 and 2009 is due to compositional effects stemming from increase in education levels.

Digression

- Brazil has a dual labor market, with formal and informal workers.
- Rights of informal workers are usually respected. The government is the loser. The employer avoids labor tax and social security contributions but pays employees benefits in order to avoid dealing with labor courts.
- It seems that informal labor in Brazil plays the role of temporary workers in Europe. The difference is that informal workers in Brazil are illegal while temporary jobs seem legal.

Beneficiaries Groups

- The probability of moving from any other state in the economy to the formal job increased for almost every group in the last 9 years.

Table 9: Transition change Towards Formal Job per Educational Group

Previous Period state	2011-2002				
	0-3	4-7	8-10	11-14	>15
Informal	-1.5	1.1	-0.5	1.3	-5.2
Formal	3.2	1.2	0.9	0.4	0.0
Unemployed	28.7	4.1	5.5	6.8	2.0
Out of labor Force	-0.3	0.1	0.6	1.1	0.5

Source: Barbosa Filho and Moura (2012).

- Increases in the real Minimum wage were important for reducing inequality.
- BF also played an important role in lowering inequality.
- With the significant real raise in minimum wage of the last 17 years, this policy is no longer cost effective.
- The literature also shows the BF program is a very effective program that targets the poor and costs only 0.5% of GDP. It also has a considerable coverage, benefiting more than 13.3 million people.

- In recent years, the unemployment rate and informality declined substantially.
- Unemployment declined more among the less educated. These suffered the larger increase in unemployment rates during the crisis.
- The increase in the relative importance of more highly educated workers accounts for 60% of the reduction in informality through the compositional effect.
- Structural change combined with a greater macroeconomic stability increased the probability of finding a formal job irrespective of one's education.