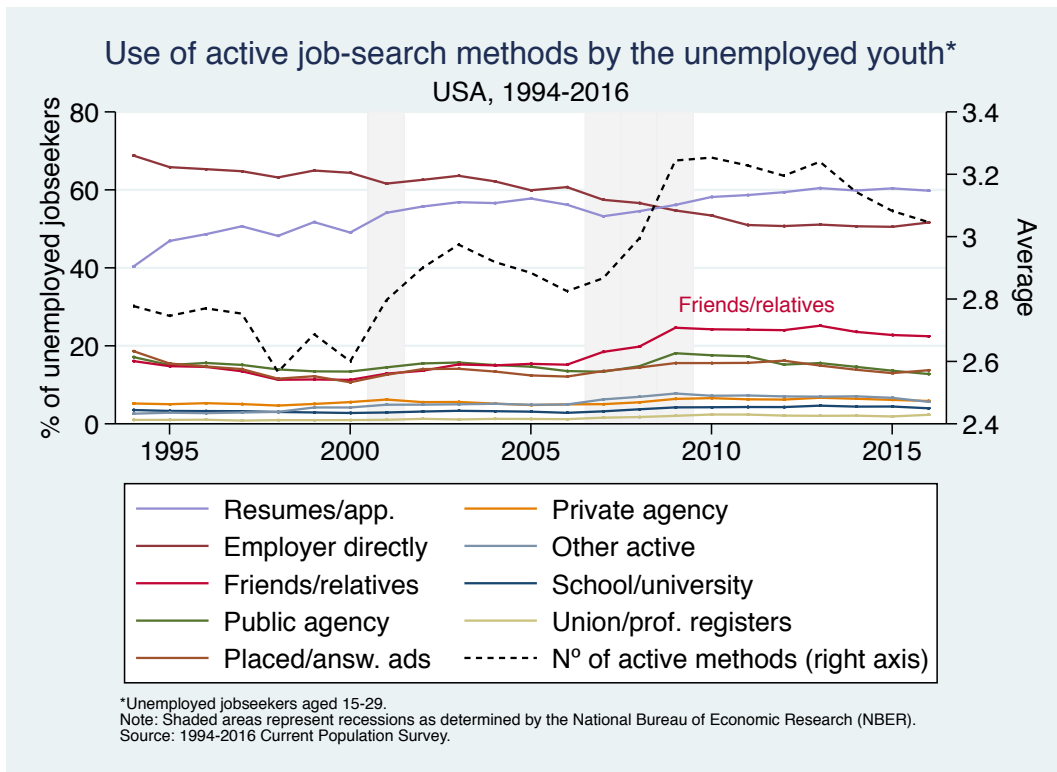
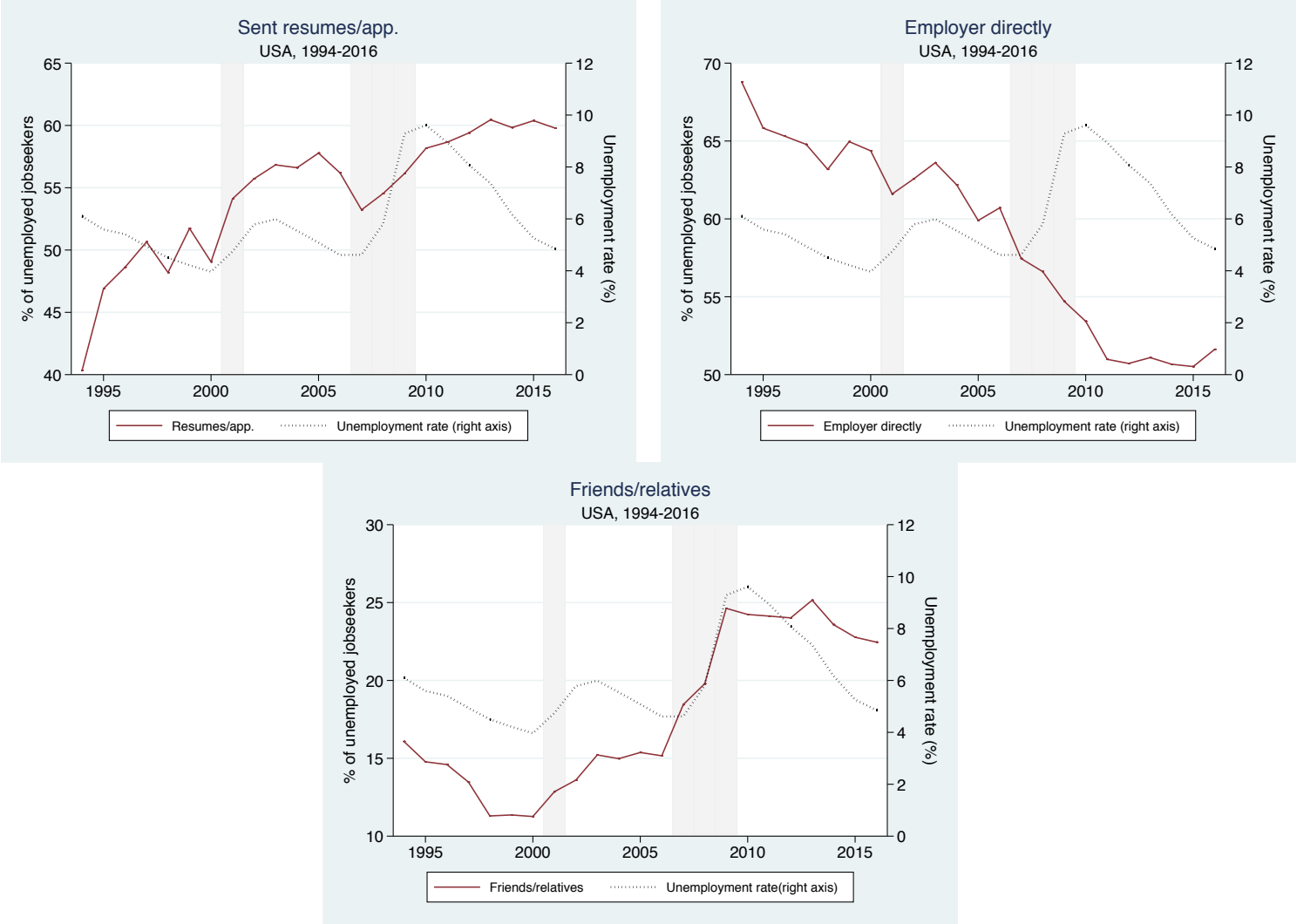


8. Appendix

Graph A 1: Active job-search methods by the unemployed youth (1994-2016)



Graph A 2: Youth’s three most used active job-search methods over the business cycle



\* Sample: Unemployed jobseekers aged 15-29.

Note: Shaded areas represent recessions as determined by the National Bureau of Economic Research (NBER).

Source: 1994-2016 Current Population Survey

The relative productivity of social networks versus formal job-search methods

Table A 1: Active job-search methods by the unemployed youth (percentages)\*

N°	Method	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2010-2012 vs 2005-2007	2014-2016 vs 2005-2007
1	Sent resumes/app.	57	57	58	56	53	55	56	58	59	59	61	60	60	60	3	4
2	Employer directly	64	62	60	61	58	57	55	53	51	51	51	51	51	52	-8	-8
3	Friends/relatives	15	15	15	15	18	20	25	24	24	24	25	24	23	23	8	7
4	Placed/answ. ads	14	13	12	12	14	14	16	16	16	16	15	14	13	14	3	1
5	Public agency	16	15	15	14	13	15	18	18	17	15	16	15	14	13	3	0
6	Private agency	6	5	5	5	5	6	6	7	6	6	7	6	6	6	1	1
7	Other active	5	5	5	5	6	7	8	7	7	7	7	7	7	6	2	1
8	School/univ. empl. center	3	3	3	3	3	4	4	4	4	4	5	4	4	4	1	1
9	Union/professional registers	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1	1

\* Note: Methods are sorted in increasing order of their 2016 frequency.

Sample: Unemployed jobseekers aged 15-29.

Source: 2003-2016 Current Population Survey.

Table A 2: Percentage of unemployed youth who contacted friends/relatives

Population	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2003-2007	2008-2016
Low educated	15	15	15	15	18	20	24	24	24	24	25	23	22	22	16	23
Highly-educated	16	16	17	15	19	20	26	25	24	24	26	25	24	23	16	24
Total	15	15	15	15	18	20	25	24	24	24	25	24	23	23	16	23

Sample: Unemployed jobseekers aged 15-29.

Source: 2003-2016 Current Population Survey.

Table A 3: Percentage of potential and valid matches X months after survey

Months later	Potential matches			Valid matches		
	Contacted friends/relatives		Total	Contacted friends/relatives		Total
	No	Yes		No	Yes	
<b>1</b>	69.4	69.9	69.5	69.0	69.5	69.1
<b>2</b>	44.0	45.5	44.3	43.4	44.9	43.7
<b>3</b>	20.9	23.3	21.4	20.5	22.8	21.0
<b>4</b>	0.0	0.0	0.0	0.0	0.0	0.0
<b>5</b>	0.0	0.0	0.0	0.0	0.0	0.0
<b>6</b>	0.0	0.0	0.0	0.0	0.0	0.0
<b>7</b>	0.0	0.0	0.0	0.0	0.0	0.0
<b>8</b>	0.0	0.0	0.0	0.0	0.0	0.0
<b>9</b>	7.7	7.3	7.6	7.6	7.2	7.5
<b>10</b>	15.3	14.2	15.0	14.9	13.8	14.7
<b>11</b>	22.6	21.2	22.3	21.8	20.3	21.5
<b>12</b>	29.6	29.2	29.5	28.2	27.8	28.1
<b>13</b>	22.0	21.9	22.0	20.7	20.7	20.7
<b>14</b>	14.4	14.9	14.5	13.5	13.9	13.6
<b>15</b>	7.0	8.0	7.2	6.5	7.4	6.7

Sample: Unemployed jobseekers aged 15-29.

Source: 2003-2016 Current Population Survey

Table A 4: Complete list of treatment effect estimators

<b>Relative productivity</b> (Relative change in baseline hazard rate)	
<b>Only 1 method</b>	
FR vs FM	$\frac{\lambda(t \text{Only 1 method, FR} = 1)}{\lambda(t \text{Only 1 method, FM} = 1)} - 1$
FR vs E	$\frac{\lambda(t \text{Only 1 method, FR} = 1)}{\lambda(t \text{Only 1 method, E} = 1)} - 1$
<b>Only 2 methods</b>	
E + FR vs E + FM	$\frac{\lambda(t \text{Only 2 methods, E + FR} = 1)}{\lambda(t \text{Only 2 methods, E + FM} = 1)} - 1$
FM + FR vs FM + E	$\frac{\lambda(t \text{Only 2 methods, FM + FR} = 1)}{\lambda(t \text{Only 2 methods, E + FM} = 1)} - 1$
<b>Absolute productivity</b> (Relative change in baseline hazard rate)	
<b>Only 2 methods</b>	
FR added to FM	$\frac{\lambda(t \text{Only 2 methods, FM + FR} = 1)}{\lambda(t \text{Only 1 method, FM} = 1)} - 1$
FR added to E	$\frac{\lambda(t \text{Only 2 methods, E + FR} = 1)}{\lambda(t \text{Only 1 method, E} = 1)} - 1$
<b>All 3 methods</b>	
FR added to E + FM	$\frac{\lambda(t \text{All 3 methods, E + FM + FR} = 1)}{\lambda(t \text{Only 2 methods, E + FM} = 1)} - 1$

Table A 5: Duration model – Productivity of friends/relatives  
(without left-biased sampling correction)

		2003- 2016	2003- 2007	Great Recession	2010- 2013	2014- 2016
<b>Relative productivity</b> (Relative change in baseline hazard)						
<i>Only 1 method</i>						
FR vs FM	Full sample	0.359 <sup>***</sup> (0.0412)	0.332 <sup>***</sup> (0.0785)	0.276 <sup>*</sup> (0.111)	0.316 <sup>***</sup> (0.0628)	0.379 <sup>***</sup> (0.101)
	Low educated	0.381 <sup>***</sup> (0.0484)	0.380 <sup>***</sup> (0.0916)	0.348 <sup>**</sup> (0.134)	0.331 <sup>***</sup> (0.0747)	0.342 <sup>**</sup> (0.115)
	Highly- educated	0.242 <sup>**</sup> (0.0749)	0.110 (0.143)	-0.0540 (0.169)	0.237 <sup>*</sup> (0.113)	0.429 <sup>*</sup> (0.199)
FR vs E	Full sample	-0.142 <sup>***</sup> (0.0272)	-0.0935 <sup>+</sup> (0.0547)	-0.149 <sup>+</sup> (0.0765)	-0.214 <sup>***</sup> (0.0402)	-0.230 <sup>***</sup> (0.0598)
	Low educated	-0.0937 <sup>**</sup> (0.0332)	-0.0261 (0.0661)	-0.107 (0.0922)	-0.171 <sup>***</sup> (0.0498)	-0.208 <sup>**</sup> (0.0724)
	Highly- educated	-0.280 <sup>***</sup> (0.0455)	-0.318 <sup>***</sup> (0.0903)	-0.342 <sup>**</sup> (0.121)	-0.316 <sup>***</sup> (0.0667)	-0.277 <sup>**</sup> (0.107)
<i>Only 2 methods</i>						
E + FR vs E + FM	Full sample	0.134 <sup>***</sup> (0.0363)	0.207 <sup>**</sup> (0.0714)	0.0476 (0.0845)	0.0501 (0.0571)	0.290 <sup>**</sup> (0.112)
	Low educated	0.119 <sup>**</sup> (0.0420)	0.224 <sup>**</sup> (0.0823)	0.0470 (0.0989)	0.0180 (0.0667)	0.229 <sup>+</sup> (0.124)
	Highly- educated	0.132 <sup>+</sup> (0.0705)	0.101 (0.138)	-0.0195 (0.155)	0.100 (0.108)	0.380 (0.237)
FM + FR vs FM + E	Full sample	-0.136 <sup>***</sup> (0.0178)	-0.178 <sup>***</sup> (0.0343)	-0.112 <sup>*</sup> (0.0523)	-0.0943 <sup>**</sup> (0.0298)	-0.175 <sup>***</sup> (0.0409)
	Low educated	-0.119 <sup>***</sup> (0.0229)	-0.143 <sup>**</sup> (0.0439)	-0.0707 (0.0675)	-0.0888 <sup>*</sup> (0.0384)	-0.172 <sup>**</sup> (0.0531)
	Highly- educated	-0.169 <sup>***</sup> (0.0282)	-0.241 <sup>***</sup> (0.0548)	-0.189 <sup>*</sup> (0.0826)	-0.115 <sup>*</sup> (0.0469)	-0.186 <sup>**</sup> (0.0642)
<b>Absolute productivity</b> (Relative change in baseline hazard)						
<i>Only 2 methods</i>						
FR added to FM	Full sample	-0.0138 (0.0198)	-0.0267 (0.0405)	-0.0600 (0.0545)	-0.00587 (0.0315)	-0.00318 (0.0470)
	Low educated	0.00611 (0.0253)	0.0166 (0.0516)	-0.0314 (0.0689)	0.00266 (0.0403)	0.0240 (0.0619)
	Highly- educated	-0.0539 <sup>+</sup> (0.0318)	-0.107 (0.0653)	-0.137 (0.0873)	-0.0283 (0.0503)	-0.0534 (0.0722)
FR added to E	Full sample	-0.183 <sup>***</sup> (0.0270)	-0.0277 (0.0586)	-0.261 <sup>***</sup> (0.0616)	-0.311 <sup>***</sup> (0.0390)	-0.130 <sup>+</sup> (0.0776)
	Low educated	-0.161 <sup>***</sup> (0.0322)	0.0254 (0.0700)	-0.277 <sup>***</sup> (0.0702)	-0.302 <sup>***</sup> (0.0472)	-0.104 (0.0928)
	Highly- educated	-0.253 <sup>***</sup> (0.0485)	-0.204 <sup>*</sup> (0.103)	-0.275 <sup>*</sup> (0.120)	-0.332 <sup>***</sup> (0.0694)	-0.189 (0.144)
<i>All 3 methods</i>						
FR added to E + FM	Full sample	-0.0256 (0.0173)	0.0343 (0.0356)	0.0210 (0.0495)	-0.0195 (0.0286)	-0.128 <sup>***</sup> (0.0387)
	Low educated	-0.0129 (0.0227)	0.0288 (0.0439)	0.0494 (0.0653)	-0.0253 (0.0374)	-0.0874 (0.0549)
	Highly-	-0.0488 <sup>+</sup>	0.0337	-0.0177	-0.0221	-0.174 <sup>**</sup>

The relative productivity of social networks versus formal job-search methods

		<b>2003-2016</b>	<b>2003-2007</b>	<b>Great Recession</b>	<b>2010-2013</b>	<b>2014-2016</b>
	educated	(0.0268)	(0.0606)	(0.0771)	(0.0440)	(0.0548)
<b>Observations</b>	<b>Full sample</b>	<b>141,639</b>	<b>50,039</b>	<b>17,282</b>	<b>44,072</b>	<b>24,671</b>
	<b>Low educated</b>	<b>95,997</b>	<b>35,983</b>	<b>11,952</b>	<b>28,561</b>	<b>15,865</b>
	<b>Highly-educated</b>	<b>45,642</b>	<b>14,056</b>	<b>5,330</b>	<b>15,511</b>	<b>8,806</b>

Note: Standard errors in parentheses. All regressions control for the same family and individual characteristics, unemployment spell attributes, local market conditions and year fixed-effects used in the previous regression of the determinants of contacting friends/relatives.

+  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

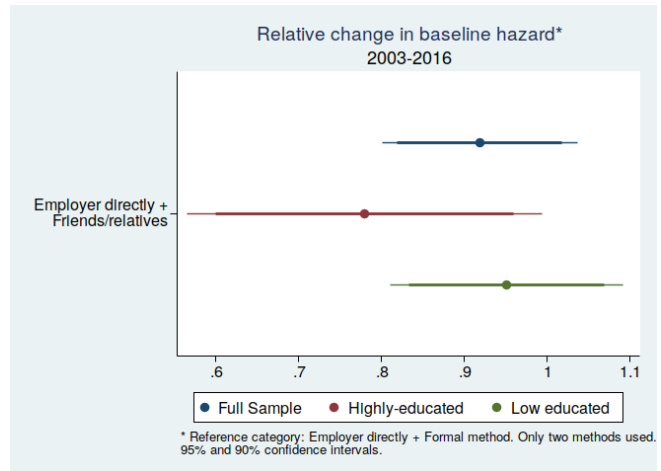
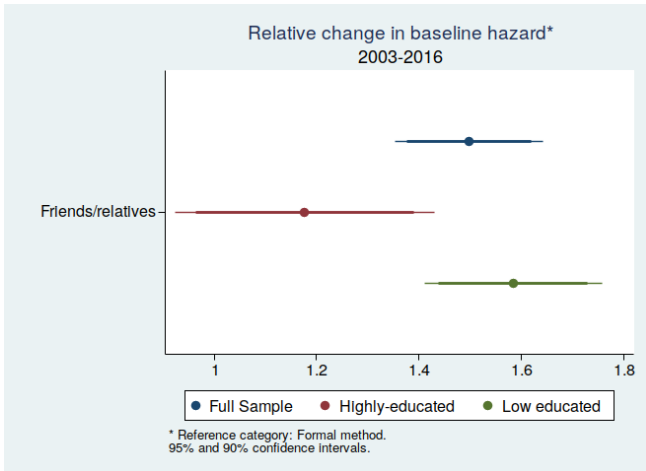
Table A 6: Duration model – Productivity of friends/relatives, 2003-2016. (with left-biased sampling correction)

<b>Relative productivity</b> (Relative change in baseline hazard)		
<i>Only 1 method</i>		
FR vs FM	Full sample	0.459 <sup>***</sup> (0.0660)
	Low educated	0.456 <sup>***</sup> (0.0764)
	Highly-educated	0.378 <sup>**</sup> (0.123)
FR vs E	Full sample	-0.131 <sup>**</sup> (0.0407)
	Low educated	-0.104 <sup>*</sup> (0.0485)
	Highly-educated	-0.222 <sup>**</sup> (0.0717)
<i>Only 2 methods</i>		
E + FR vs E + FM	Full sample	0.187 <sup>**</sup> (0.0574)
	Low educated	0.164 <sup>*</sup> (0.0673)
	Highly-educated	0.209 <sup>+</sup> (0.108)
FM + FR vs FM + E  -0.234 <sup>***</sup> (0.0405)	Full sample	-0.191 <sup>***</sup> (0.0265)
	Low educated	-0.175 <sup>***</sup> (0.0346)
	Highly-educated	-0.234 <sup>***</sup> (0.0405)
<b>Absolute productivity</b> (Relative change in baseline hazard)		
<i>Only 2 methods</i>		
FR added to FM	Full sample	-0.0592 <sup>*</sup> (0.0302)
	Low educated	-0.0368 (0.0391)
	Highly-educated	-0.117 <sup>*</sup> (0.0463)
FR added to E  -0.213 <sup>**</sup> (0.0727)	Full sample	-0.178 <sup>***</sup> (0.0407)
	Low educated	-0.164 <sup>***</sup> (0.0490)
	Highly-educated	-0.213 <sup>**</sup> (0.0727)
<i>All 3 methods</i>		
FR added to E + FM	Full sample	-0.0573 <sup>*</sup> (0.0266)
	Low educated	-0.0656 <sup>+</sup> (0.0343)
	Highly-educated	-0.0632 (0.0416)
<b>Observations</b>	<b>Full sample</b>	<b>141778</b>
	<b>Low educated</b>	<b>96136</b>
	<b>Highly-educated</b>	<b>45,642</b>

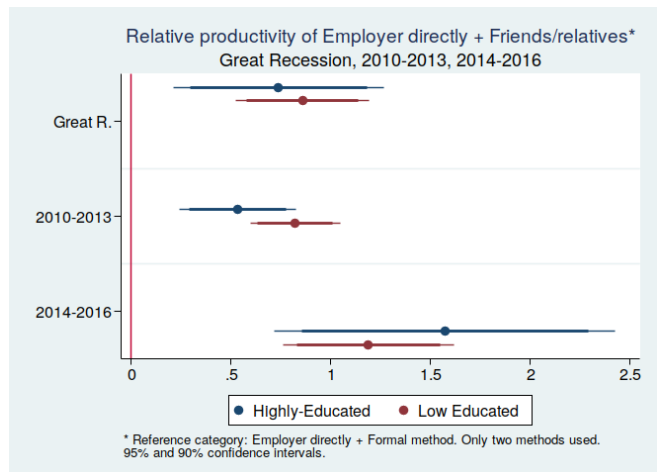
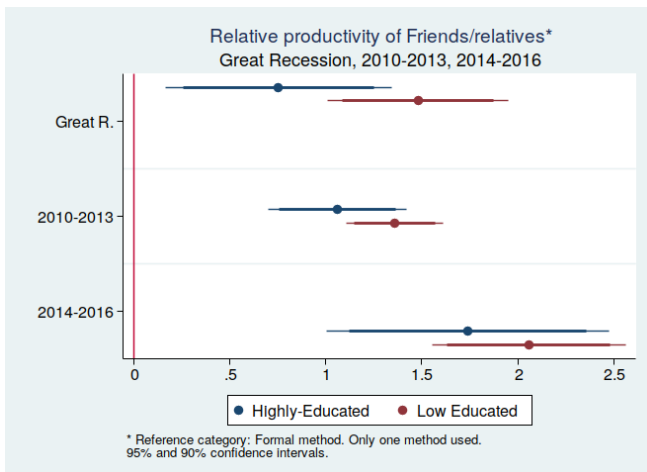
Note: Standard errors in parentheses. All regressions control for the same family and individual characteristics, unemployment spell attributes, local market conditions and year fixed-effects used in the previous regression of the determinants of contacting friends/relatives. <sup>+</sup>  $p < 0.1$ , <sup>\*</sup>  $p < 0.05$ , <sup>\*\*</sup>  $p < 0.01$ , <sup>\*\*\*</sup>  $p < 0.001$

The relative productivity of social networks versus formal job-search methods

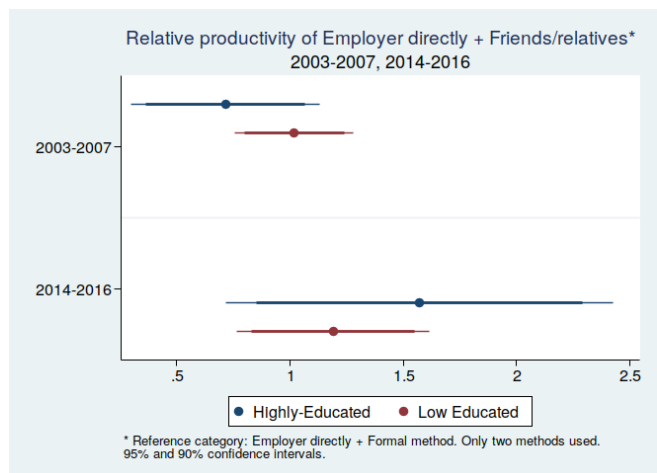
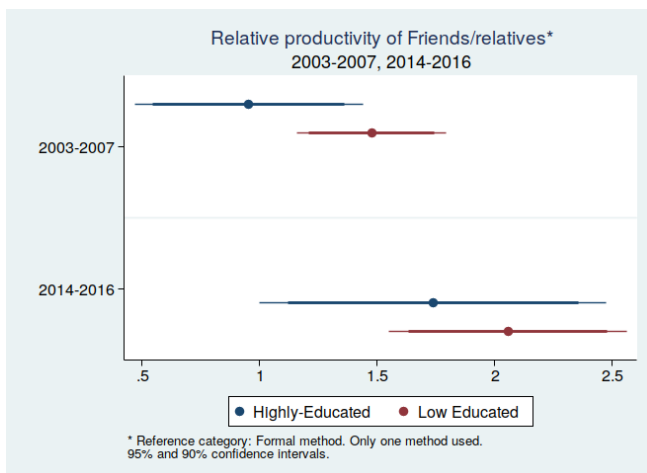
Graph A 3: Relative productivity of contacting friends/relatives (2003-2016)



Graph A 4: Relative productivity of contacting friends/relatives over the business cycle



Graph A 5: Relative productivity of contacting friends/relatives (potential congestion effects)



Graph A 6: Duration model – Relative change in baseline hazard rate by unemployment duration interval, 2003-2016

