The Creative Class

Do Jobs follow People or do People follow Jobs?

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Abstract

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Research issue

- The research issue is already suggested by the title of the presentation - "The Creative Class: do Jobs follow People or do People follow Jobs?"
- We will make the issue more precise through a set of hypothesis about Jobs follow People (JP) and People follow Jobs (PJ) after the motivation

Motivation

- A large literature, following Muth (1971) has tried to answer if JP or PJ (Mulligan et al., 1999; Hoogstra et al., 2005). The evidence is mixed.
- The answer has important regional policy implications - if PJ, growth policies should target jobs; if JP, policies should target people.
- Aggregate data may conceal different results for subgroups (jobs or people) - do, e.g., manufacturing jobs follow people or people follow manufacturing jobs? (Evidence still mixed)

Motivation

- One subgroup of particular interest is the Creative Class (CC) where the literature so far appears to have ignored potential bidirectionality by assuming away PJ (Storper and Scott, 2009).
- Operationally, CC is often based on national statistical classifications consistent with ISCO-88 - see, e.g., Boschma and Fritsch (2009).
- According to ILO, "ISCO is a tool for organizing *jobs* into a clearly defined set of groups according to the tasks and duties undertaken in the job."
- Data on CC is therefore (arguably) more related to jobs than to people.

Motivation

- CC is often proposed as an alternative to human capital (HC) - read: educational attainment - as an explanatory variable.
- But isn't HC an attribute of people more than jobs?
- On basis of these considerations, we propose to test bidirectionality between CC jobs and HC people.

Hypothesis

- Main hypothesis:
  JP1. CC Jobs follow HC People
  PJ1. HC People follow CC Jobs
- However, a long range of additional hypothesis may be put forward and tested in order to compare to other studies and for its own sake:
  JP2. Jobs follow People / PJ2. People follow Jobs
  JP3. CC Jobs follow People / PJ3. People follow CC Jobs
  JP4. Jobs follow HC People / PJ4. HC People follow Jobs
- Or maybe even:
  Jobs follow CC Jobs or People follow HC people...

Spatial Considerations

- Many previous studies have been based on data for spatial units not corresponding well to functional regional labour market regions (counties, census tracts, municipalities, NUTS 3, etc) - concern over validity
- We use data on functional regions (labor market areas) - 250 regions in total (N:89, S:87 and FI:74) - less reason for concern over spatial dependence suggests a non-spatial econometric specification (2SLS, Carlino and Mills, 1987)
- Data on CC is consistent with the 7 country study (Boschma and Fritsch, 2009) - we add data for 2008 to 2003 data for N and S/ 2004 data for FI

Model

- The deterministic part of the model to be estimated:

$$\Delta p/T = \alpha_0 + \alpha_1 p_{t-} + \alpha_2 j_t + \alpha_3 \mathbf{x}_{pt-} \quad (1)$$

$$\Delta j/T = \beta_0 + \beta_1 j_{t-} + \beta_2 p_t + \beta_3 \mathbf{x}_{jt-} \quad (2)$$

- Left side variables: average annual growth rates for people and jobs (change in natural logs over time divided by years)
- Right side variables: initial levels (logs) and terminal levels for the potential endogenous variable (jobs in the people equation and people in the jobs equation measured in logs, to be instrumented), intial levels for control variables measured in logs and included in the x vectors.

Variable Definitions

People Density	Working age population/ Area
Main People Density	Working age population without higher education/ Area
Smart People Density	Working age population with higher education/ Area
Job Density	Employment/ Area
Smart Job Density	Creative core and professionals/Area
Main Job Density	Employment excl. Smart Jobs and bohemians/Area
Bohemian Job Density	Bohemians/ Area
Industry Composition	Initial employment for ESA-95 codes C (mining and quarrying), D (manufacturing), and E (electricity, gas and water supply)
Population	Total initial population
Accessibility	Distance weighted initial employment of other regions

Data: descriptive statistics

	Median			SD		
	Norway	Sweden	Finland	Norway	Sweden	Finland
Initial PD	0.95	0.89	0.95	0.21	0.59	0.32
PD 2008	0.95	0.89	0.95	0.22	0.62	0.36
Initial HCD	0.75	0.73	0.84	0.87	1.04	0.72
HCD 2008	0.74	0.72	0.83	0.91	1.04	0.73
Initial JD	0.95	0.88	0.91	0.22	0.65	0.43
JD 2008	0.93	0.82	0.88	0.33	0.68	0.46
Initial CJD	0.85	0.77	0.83	0.64	0.90	0.69
CJD 2008	0.75	0.75	0.79	1.04	0.94	0.74
Initial Pop	0.49	0.31	0.50	1.46	2.64	2.10
Access	0.55	0.88	0.85	1.34	0.72	0.80

Note: All variables are expressed as location quotients, the ratio of regional to national values.

Cartogram

See separate pdf - mapcart

Results - Aggregate

Table 2. The Aggregate Model: Structural Form

Variable:	People Density (PD) Growth Rate	Job Density (JD) Growth Rate
Initial Density (ID) Swe	-0.014 (-2.57)**	-0.026 (-1.55)
ID Nor	-0.021 (-3.42)***	-0.009 (-0.52)
ID Fin	-0.019 (-3.46)***	-0.015 (-1.13)
JD 2008	0.016 (2.87)***	
PD 2008		0.008 (0.53)
Capital Area	0.004 (2.30)**	-0.031 (-5.19)***
City Region	0.005 (4.94)***	-0.008 (-1.83)*
Initial Population	0.002 (2.42)**	0.002 (0.62)
Initial Accessibility	0.003 (3.91)***	-0.008 (-3.19)***
Initial Industry Composition	-0.000 (-0.65)	0.006 (2.53)**
Initial Bohemian Index	0.002 (2.11)**	0.010 (3.06)***
F(regions)	3.72 (0.000)	1.98 (0.010)
Diagnostics		
R square	0.713	0.457

Results - Sectors

See separate pdf - Table 3

Summary

- Aggregates: PJ - no JP
- Smart and Main: JP - no PJ
- Puzzle? Maybe not - have to consider Between Sectors as well as Within Sector dynamics
- Main Jobs deterred by Smart People
- Strong circular causation between Smart and Main Jobs