

The Baltic Sea Regions? BSR Performance According to the Three T's of Developments

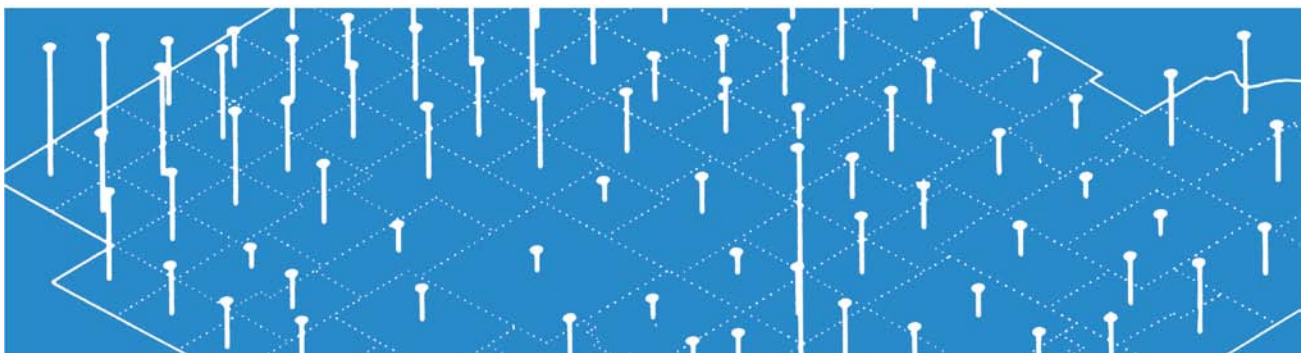
Working Paper Series:
Martin Prosperity *Research*

Prepared by:

Charlotta Mellander, Ph. D
Patrick Adler

October 2009

REF. 2009-MPIWP-005



INTRODUCTION

Does the Baltic Sea Region (BSR) exist? Given the forum for this paper, this is probably an unnerving question. However, in our case- this question is of crucial importance. For the bureaucrat, a region needs only a boundary and a budget to exist. For the oceanographer a region needs only a body of water. But for the economic geographer the question of whether a region exists must not be taken for granted. Economic activity is notoriously hard to contain within political boundaries. On one hand there is hardly a regional economy that does not have more than one jurisdiction; on the other the types of economic activity can vary enormously by neighborhood, meaning larger units can wash out interesting phenomena. As for water- it can just as easily be a barrier to trade (ie the pacific ocean) as it can be regional unifier.

The recent establishment of the BSR Programme with its ambitious mission begs yet more questions about the existence of a “Baltic Sea Region”. According to the BSR’s draft strategy- the program is devoted to, among other things to“(d)eepening the integration of the markets in the Region is imperative to tackle the low of competition in the Region.”

But is the region very integrated to begin with? The limited amount of economic geography that has been done on the BSR to date is rather dour on this point. Hanell et al. (2001) say clearly that the region is “ not yet a functional region” because there are such large disparities between the east and the west, the north and the south, and the small countries and the large countries. Among the areas where the region is said to be nationally and not internationally oriented is trade (that is there are significant barriers to trade), infrastructure (no single infrastructure system exists), Karpil (2003) speculates that immigration barriers erected by Nordic countries in the regions against non EU , former bloc countries is another factor inhibiting immigration. Heikkila et al. (2004) find that even immigration between the recently admitted EU countries and the Nordic countries will not exceed modest levels.

This report examines the talent environment in the BSR from the perspective of Florida’s “Three T’s”. It begins by establishing the importance of knowledgeable labor (“talent”), amassed knowledge (technology) and tolerance to economic activity. It then analyzes

similarities and differences in the BSR “talent environment” by using metrics. It concludes by discussing the implications of these findings on BSR integration.

TALENT, TECHNOLOGY AND TOLERANCE IN ECONOMIC DEVELOPMENT

There is a wide-ranging literature on the relationship between talent (also called “human capital”), technology and economic development, which can be traced back to the work of Solow (1956), whose key contribution was to identify technological change as the factor behind growth, not explained by increasing input of capital or labor.

Romer (1986,1987,1990) and Lucas (1988) built on these insights by elaborating on the role that high-knowledge workers play in technical change. Each proposed that “human capital” was an independent and important factor in development, alongside capital and labor. Romer suggested that the rate of *invention* was endogenous, determined both by the presence of a knowledgeable workforce, and by the pre-existing stock of knowledge. This was a revision of Solow’s contention that technology was exogenously determined. Lucas showed that investment in knowledge did not only improve an individual’s productivity- but improved the productivity of the people around her- that is clustered knowledgeable workers created positive externalities for the local economy.

These growth models have become accepted wisdom as they have been verified empirically. On a national level, Barro(1991), Rauch (1993), Simon and Nardinelli (1996) and Simon (1998) all find a significant relationship between national growth and national human capital. The relationship also holds at a regional level according to studies by Glaeser (2000, 2003), Florida (2002), Marlet and van Woerkens (2004).

Although the importance of human capital to development is no longer in question, a debate has recently opened up over how to measure it. Traditionally, educational achievement has been used as a proxy for knowledge or skill. Glaeser (2004), among others, measures skill in this way. Recently, some development theorists have begun to define skill according to what a

worker does, and not what his educational achievement is. Florida's "Creative Class" (2002) is a set of occupations which includes workers that are paid to think; a group which includes artists, professionals, scientists, and inventors. Markusen (2004, 2006) also deploys occupational measures in her studies of skilled labour. Emphasis on a non-educational definition of "talent" is rooted in the recognition that many members of society make enormous economic contributions even though they do not have tertiary degrees. Bill Gates and Michael Dell represent two of the most successful technology companies in the world- and they would not be counted as "talented" by the traditional members.

Recent research has tried to resolve these debates, and now the emerging consensus is that there is a false choice between "human capital" and the "creative class". In a study of the American regional system, Florida et al. (2008) find that while each talent measure is significantly related to growth, they seem to act in different ways to affect development. The authors find that higher education levels are more associated with regional incomes than the creative class but higher concentrations of the creative class seem to improve wages by improving worker productivity. Mellander and Florida (2007) and Marlet and van Woerkens (2004) use European datasets to conclude that each measure is significantly related to urban growth. Although the creative class measure is ultimately more related, both measures are significantly related to technological activity which is in turn related to Regional development. But perhaps the biggest reason to embrace each measure is that they are in fact, highly correlated with each other (Glaeser, 2004; Florida, 2004).

Another recent debate has focused on why the distribution of talent is so uneven (Florida et al, 2008) and especially whether or not social openness explains differentials in human capital concentration. The idea that there is a relationship between growth and tolerance of minorities, artists, and homosexualshas received much support. Noland (2005) and Andersen and Fetner (2008) find that acceptance of homosexuals is associated with national economic growth. Ottaviano and Peri (2005) discover a link between diversity and regional productivity.

The tolerance/development link has also been the subject of critique on the basis that tolerance does not significantly relate to growth. Glaeser (2004) finds that traditional human capital outperforms tolerance on regional growth measures. Clark (2003) only finds significant relationships between openness to homosexuals and urban growth in large cities.

For his part, Florida (2002,2008b) does not suggest that there is a direct causal, relationship between social tolerance and growth. He does describe how an atmosphere open to ethnic minorities and homosexuals- helps to activate talent in three less direct ways:

- 1st Tolerance reflects low barriers to entry for human capital- it means that a wider cross-section of talent will be able to settle in an area.
- 2nd Tolerance signals that a place's values are oriented towards open-mindedness, tolerance, self-expression and merit. According to pioneering work by Inglehart et al. (See Inglehart and Norris,2003) these values form the core of a values system that is associated with highly developed societies.
- 3rd Tolerance signals openness to new ideas and products. The recombination and reconfiguration of cultural norms and traditions into new ideas is a hallmark of goods and services production in the post-modern age. Openness to foreign cultures and minority perspectives signals an openness to the ideas of "the other"- ideas which are increasingly profitable.

For all its criticisms, Florida's (2002) "Three Ts" framework remains a defensible and refreshingly unified approach to studying human capital. The approach assumes that three aspects of a region's economy should be studied in ascertaining regional health: its talent base, its technological specialization, and its tolerance of "outsiders". The first of these is a direct measure of the human capital level in a place at any given point. The second uses multiple indicators to determine both the amount of human capital engaged in technological work in and to gauge the size of the local knowledge that has been accumulated over time. The third uses indicators to determine how much talent is being activated in a particular area.

The preceding discussion has demonstrated that human capital is a crucial factor in modern economic growth and maintenance.

TALENT- DIRECT TALENT MEASURES

In this paper, the BSR countries were measured using three direct talent indicators: creative class share, tertiary education attainment and researchers per capita. Each is a measure of a state's human capital stock at survey time. The first two represent the two dominant measures of talent in growth theory. The third is a more detailed and rigorous measure of talent which like Florida's "Super Creative Core" (Florida 2002) captures a population engaged in high level discovery and idea creation.

Figure I Creative Class Share/Ranking (ILO data, average share of employees 2000-2007):

Country	Creative Class Share	World Rank	BSR rank
Sweden	43.02	6	1
Denmark	42.73	7	2
Finland	42.21	9	3
Norway	41.71	10	4
Germany	40.57	11	5
Estonia	39.18	16	6
Russian Federation	37.43	20	7
Latvia	34.64	31	8
Lithuania	33.03	40	9
Poland	31.09	44	10
Belarus	Not reported	-	-

*N= 128

Perhaps expectedly, the homelands of creative brands like IKEA, H &M and Ericsson, had the highest share of creative occupations- ranking in the top three respectively. These countries also ranked in the top ten internationally, ahead of such places as the UK (rank 13) or France (rank 17). Norway and Germany, were only marginally behind Sweden, Denmark and Finland in terms of creative class share and world rank. Other world leaders were the Netherlands (46.57% creative class in relation to the labour force) , Singapore (46.04%) and Switzerland (43.76%).

The former Soviet bloc nations of Estonia, Russia, Latvia, Lithuania and Poland did not fair as well relative to the BSR, but still scored above thirty percent and in at least the 65th percentile internationally.

Empirically, at the regional level, creative class shares above forty percent have been considered very high (Florida, 2002) . In a recent North American estimate at the state and provincial level, no jurisdiction scored above the forty percent level (Martin Prosperity Institute, 2009). Because these numbers are compiled differently than in previous studies ,they should not be directly compared. That said, having 40% or even 30% percent of a labor force engaged in creative work is good news for the Baltic Economies.

Figure II Education Rank (World Development Indicators for Tertiary School Enrollment for year 2005):

Country	Education Share	World Rank	BSR rank
Finland	91.87	1	1
Sweden	81.62	6	2
Denmark	80.78	7	3
Norway	78.47	9	4
Lithuania	76.46	10	5
Latvia	74.86	11	6
Russian Federation	70.46	13	7
Estonia	65.96	17	8
Poland	64.07	20	9
Belarus	63.94	21	10
Germany	Not Reported	-	-

*N=116

The Tertiary School Enrollment (TSE) metric of the World Development Indicators is an effective measure of a nation’s so-called “human capital” stock. It is a ratio of the percentage of an age cohort enrolled in Post-Secondary Education(College, University, Advanced Vocational) against the total number of people in that age cohort. It is thus a good gauge of how well the country converts its stock of labour into educated and skilled labour.

The order of the top three nations is slightly different with this talent measure- but Finland Sweden and Norway are still in the top three, while Norway is fourth. The measures also differ in terms of variation. Finland, which leads the world on this indicator, registers a full ten percentage points above Sweden, Denmark, and Norway- indicating a decisive advantage in human capital. All four nations, with the addition of Lithuania, are in the global top ten. The remaining BSR nations might not register in the top five in the region- but they rank in the top 80th percentile globally.

High TSE scores constitute good news for the region- no other region in the world had five nations in the top ten on this metric. Other nations in the top ten were Greece (89.4%), South Korea (90.39%) and the United States (82.23%). On the other hand, the region’s university systems do not boast the same success as others. In the most authoritative ranking of national systems- Sweden and Germany are the only BSR countries in the top ten and neither Lithuania, Estonia or Latvia place in the top forty (Quacquarelli, 2008).

Figure III Average numbers of researchers in R&D per 1000K Capita (average value 2000-2005), based on the World Development Indicators

Country	Researchers in R&D	World Rank	BSR rank
Finland	7438	1	1
Sweden	5492	3	2
Denmark	4602	6	3
Norway	4587	7	4
Russian Federation	3373	14	5
Germany	3223	15	6
Estonia	2246	22	7
Lithuania	2107	25	8
Poland	1510	31	9
Latvia	1466	33	10
Belarus	Not reported	-	-

*N=81

The number of researchers in R&D can be considered a finer measure of talent than the aforementioned metrics. Each individual counted here can be reasonably assumed to be a contributor to her country’s creative output, while not every person enrolled in a tertiary education program can be assumed to be a creative worker, and not every occupation covered in the selected ILO occupation group, is part of the creative economy. And although the metric is different, observed trends are quite similar to the other talent indicators.

Once again, Finland, Sweden, and Denmark fare in the top three in the region and in the top ten globally, with Norway following close behind. The research hotbeds of Iceland, Japan and Singapore also fared very well (2nd, 4th, and 5th respectively). Each BSR nation ranked in the top 60th percentile- while Lithuania, Estonia, Russia and Germany ranked in the top seventy percent of the global class.

TECHNOLOGY- MEASURES OF KNOWLEDGE STOCK AND INFRASTRUCTURE

Our technology indicators attempt to gauge two important dimensions of a nation's technological stock. Through R&D expenditure, we measure the degree to which investment is made in high technology. In addition to talented people. Scientific discovery requires a great deal of infrastructure. This measure reflects the share of a nation's wealth that is devoted to technology. Through international patent awards we measure the degree to which this investment translates into unique scientific discovery.

Figure I R&D Expenditures as a percentage of GDP (average value 2000-2005) , based on the World Development Indicators

Country	R&D Spending	World Rank	BSR rank
Sweden	4.019	3	1
Finland	3.451	4	2
Germany	2.487	9	3
Denmark	2.438	10	4
Norway	1.628	20	5
Russian Federation	1.163	24	6
Estonia	0.804	35	7
Lithuania	0.686	41	8
Belarus	0.664	42	9
Poland	0.583	50	10
Latvia	0.438	56	11

* N= 107

Individual BSR nations vary widely in terms of their investment in R&D. Sweden, which ranks third in the world, devotes more than eight times the GDP share to R&D that Latvia (which ranks 56th) does. Four nations- Sweden, Finland, Germany and Denmark rank are amongst the top ten technology investors, while Latvia and Poland are in the bottom 55% of countries on this measure. Estonia, Lithuania , and Belarus each spend less than a whole percentage point of GDP on R&D. Japan, which has one of the world's largest economies, ranks first in the world (15.87%), while Israel spends the second (4.817%) most

Figure II Intellectual Property Rights Patents per Capita 2000-2007

Country	Intellectual Property Rights	World Rank	BSR rank
Finland	44.101	4	1
Denmark	43.608	5	2
Sweden	41.512	7	3
Norway	31.856	9	4
Germany	7.179	26	5
Latvia	4.179	34	6
Estonia	2.846	38	7
Lithuania	1.877	44	8
Russian Federation	0.514	64	9
Poland	0.454	65	10
Belarus	Not reported	-	-

*N=97

No matter how the data is sliced- BSR countries patent at dramatically different rates. The top patenting country in the region, Finland, did so 100 times more than the bottom country, Poland. The BSR's top four patenting countries: Finland, Denmark, Sweden and Norway each ranked in the top ten globally, while the bottom ranked no better than 26th.

3.0 TOLERANCE BARRIERS TO HUMAN CAPITAL

Tolerance, while not a direct measure of human capital, is an important proxy for the "human capital environment. We deploy four measures: two value-based and two attitude-based to divine the region's level of openness to human capital. The attitude-based indicators allow residents themselves to rate openness to different people, while the values indicators measure openness to new ideas.

Figure I :Attitudes to Gays and Lesbians

Country	Gay and Lesbian	World Rank	BSR rank
Sweden	0.66	8	1
Denmark	0.65	9	2
Norway	0.62	12	3
Germany	0.55	17	4
Finland	0.54	19	5
Estonia	0.23	51	6
Poland	0.23	51	6
Latvia	0.19	59	8
Lithuania	0.14	68	9
Russian Federation	0.13	70	10
Belarus	Not reported	-	-

*N=89

Figure II: Attitudes to Ethnic Minorities

Country	Racial Ethnic Minorities	World Rank	BSR rank
Sweden	0.81	8	1
Norway	0.73	20	2
Denmark	0.69	26	3
Germany	0.65	31	4
Finland	0.64	34	5
Latvia	0.51	67	6
Poland	0.50	71	7
Russian Federation	0.41	83	8
Estonia	0.40	84	9
Lithuania	0.39	86	10
Belarus	Not reported	-	-

*N= 94

Unlike with the indicators mentioned to this point, no BSR nation is in the top ten percent of nations in terms of openness to gays and lesbian and ethnic minorities. Sweden, the top ranked country, is ranked 8th out of 89 countries on both measures. Index scores for these countries are considerably lower than for the top three nations on the first measure: the Netherlands (.83), Canada (.77) and Spain (.75) and on the second one: Nepal (.92), Canada (.91) and New Zealand (.87). Former Soviet Bloc nations fare no better than the 42nd percentile on the first measure and the 27th percentile on the second. As with previous, there is significant variation amongst BSR nations; there are 62 and 80 ranking spots between the top and bottom nations.

Figure III: Secular Rational Values

World Value Survey (based on latest registered value) Secular Rational Values:

Country	Secular Rational Values	World Rank	BSR rank
Sweden	1.86	2	1
Norway	1.39	3	2
Germany	1.35	4	3
Estonia	1.27	5	4
Denmark	1.16	8	5
Lithuania	0.98	11	6
Belarus	0.89	12	7
Finland	0.82	14	8
Latvia	0.72	20	9
Russian Federation	0.49	28	10
Poland	-0.78	63	11

*N=98

Inglehart (2003) has found that openness to new ideas is positively associated with secularism, and with this in mind, the BSR is one of the most secular regions in the world. The top five states in the BSR rank in the top ten globally on this metric. Nations 6-10 also rank as more secular than seventy percent of nations' study. Poland- a staunchly catholic country, posts a negative index score, and is one of the 25 least secular places amongst survey nations.

Figure IV: Self Expression Values

Country	Self-Expression Value	World Rank	BSR rank
Sweden	2.35	1	1
Norway	2.17	2	2
Denmark	1.87	5	3
Finland	1.12	18	4
Germany	0.62	23	5
Poland	-0.14	50	6
Lithuania	-1.00	76	7
Estonia	-1.19	83	8
Belarus	-1.23	85	9
Latvia	-1.27	88	10
Russia	-1.42	94	11

*N=98

Sweden, Norway and Denmark rank in the top three in the BSR and the top five globally in terms of self expression values. They are joined by Canada (1.91) and Switzerland (1.90) in the top five, Former soviet bloc nations fare noticeably worse, although even amongst this group

there is some variation. Poland is in the 49th percentile on this measure while Russia is in only the top four percent of nations.

DISCUSSION

The preceding has been an exercise in ranking the BSR- based on eight metrics related to talent: Talent (that is the direct number of skilled workers), Technology (the stock of knowledge and knowledge infrastructure) and Tolerance (the environment for talent). For the most part, our findings can be framed as answers to two questions. Some, have given us a clearer indication of how the region stacks up to the rest of the world, others have offered more information about the level of integration in the BSR.

Regarding Talent, What is the Strength of the BSR?

The BSR as a whole seems to produce a large stock of skilled workers. In addition it is home to some technologically and culturally-supportive states.

The BSR excels as place with high counts of talented people. BSR states are amongst the top ten nations on all three direct measures of talent- and no state is below average globally in any one of these measures. Workers in this region are more engaged in high value, creative occupations than in the average region or state; they enroll at higher rates in tertiary education and they participate more in research and development. While some BSR states have inherited Soviet education systems and Soviet economies, they have still – it would seem- been able to produce the workers that modern capitalism demands. The measures used to test talent are crude. They don't, for instance, distinguish between productive creative workers and less productive ones or between top 200 university degrees and top 500 degrees. Still, doing well on our talent metrics is certainly preferable to the alternative, and these talent measures are the most used in the literature.

The BSR might not be construed as open or technologically advanced but it is still home to some of the world's most tolerant and technology endowed states. BSR countries are in the top ten percent of all regions based on R&D expenditure, Patenting, Secular Values, and Self Expression

Values. Some BSR regions still score in the top twenty percent on two metrics on the two remaining metrics (openness to minorities, openness to gays and lesbians.)

Is the BSR an Integrated Region in Terms of Talent?

Patterns in the “3 Ts” data, suggest that the region’s labour market is not currently integrated as one coherent unit- that it would be more accurately described as two economic regions fused together: a North BSR and a South BSR. Even though most of the region is subject to very few official barriers to migration, there are not enough incentives and there are too few barriers to create even flows of talent in the region.

With most of the aforementioned indicators, there is a clear geographic trend in which nations score highly and which do not. The contiguous Nordic (Northern) countries of Sweden, Denmark, Finland and Norway tend to score highest on Direct Talent, Technology and Tolerance, indicators, while the former soviet bloc countries : Lithuania, Latvia, Estonia, and Poland score the lowest , and the two largest countries (Germany and Russia) score in between.

The tolerance numbers suggests that, compared to the world at large, the Northern BSR possesses lower barriers to talent, while the Southern BSR contains considerably more barriers. At best, this suggests that the labour markets between the Nordic BSR and the Bloc BSR are only integrated in one direction- that Bloc land talent can migrate to the Nordic countries but not vice versa.

Similarly, the technology numbers reflect on the lack of talent integration in the region. The Northern BSR dominates the Southern BSR in terms of patents per capita and investment in R&D. This is significant because both patents and investment can be considered “pull factors” affecting location decisions, with patents as a proxy for the local innovation system, and investment as a direct incentive for tech entrepreneurs.

Specialization of tech talent does not by itself, suggest that the region’s talent system is integrated. One part of an integrated talent region could specialize in technological functions, while another could specialize in Commerce, or Education. However, the Northern BSR also has a disproportionate stock of directly-defined talent (Creative Class, Human Capital, and

Researcher) when compared to the South. Even though the region as a whole performs well on direct talent- there is still a strong magnetism of talent to the northern states. The BSR talent story is probably best communicated by way of example. If you are a lesbian fashion designer, or someone looking for venture capital, or a Turkish physicist, or an eccentric of any sort, it seems as though you would not be nearly as likely to migrate to the southern part of the region as the north. Not only are you less likely to feel comfortable in the Southern regions than the northern ones. You will also have less access to technological investment, or to a pool of established knowledge- and also you will encounter fewer talented people like yourself.

These results suggest that there is currently minimal labour market integration across the BSR. By no means does this speak to the level of infrastructural, military, or even trade integration between BSR nations.

Towards New Scales for Talent Integration?

The lack of cross-national labour market integration might be of concern for BSR policymakers who seek fuller cross-national unity. We suggest that the national scale is not the only level at which the labour market might be integrated. Policymakers aiming to shore up connections between the Northern and Southern BSR or between its EU and non EU portions, should consider initiatives at the metropolitan or mega-region scale.

The erection of the Öresund bridge between Malmö and Copenhagen was essential in creating a daily flow of commuters between Sweden and Denmark (Schmidt, 2005). Policymakers can mimic the success of this project by creating more infrastructure links between cities such as Guben, Germany and Gubin, Poland or Imatrum, Finland and Svetogorsk, Russia. Of course development differences between Northern and Southern countries might preclude the level of integration found in Oresund, but working cross-national metropolitan regions are observed at several points on the US-Mexico border (Peach and Adkisson, 2000). Common road, transit and water systems or town centres and recreation facilities would not by themselves transmit attitudes of tolerance- but they might bring about greater physical interaction between nationals from different countries, and ultimately foster openness to other cultures. Common research projects or innovation centers might act as pull mechanisms for BSR talent.

Should cross-national metropolitan linkages be strong enough, and spatially dispersed enough- than the region might very well see the emergence of a transnational mega-region. Florida et al. (2008) find that the mega-region is a significant unit of economic activity- with the top forty mega regions controlling 66% of global output and 85% of innovation. The BSR does not yet have an urban agglomeration in the top forty of mega-regions- but it might yet if it seeks to act at this level.

References

- Andersen, Robert, and Tina Fetner. "Economic Inequality and Intolerance: Attitudes toward Homosexuality in 35 Democracies." American Journal of Political Science 52 (2008): 942-58.
- Berry, Christopher R., and Edward L. Glaeser. "The Divergence of Human Capital Levels across Cities." SSRN eLibrary (2005).
- Boschma, Ron A., and Michael Fritsch. "Creative Class and Regional Growth Empirical Evidence from Eight European Countries." SSRN eLibrary (2007).
- Cooke, Philip. "Regional Innovation, Entrepreneurship and Talent Systems." International Journal of Entrepreneurship and Innovation Management 7 (2007): 117-39.
- Florida, Richard, Tim Gulden, and Charlotta Mellander. "The Rise of the Mega-Region." Cambridge J Regions Econ Soc 1.3 (2008): 459-76.
- Florida, Richard, Charlotta Mellander, and Kevin Stolarick. "Inside the Black Box of Regional Development--Human Capital, the Creative Class and Tolerance." J Econ Geogr (2008): lbn023.
- Glaeser, Edward L. "Book Review of Richard Florida's Rise of the Creative Class." Cambridge: Harvard University, 2004.
- Gottmann, Jean. "Megalopolis or the Urbanization of the Northeastern Seaboard." Economic Geography 33.3 (1957): 189-200.
- Hanell, Tomas, et al. The Baltic Sea Region Yesterday, Today and Tomorrow- Main Spatial Trends. Stockholm: Nordic Centre for Spatial Development, 2001.

- Karppi, J Ilari. "Labour Force Mobility in the Baltic Sea Area and the Transition Economies: With Special Reference to Economic Integration." The Nebi Yearbook 1998. Eds. Lars Hedegaard and Bjarne Lindstrom. 2003.
- Marlet, Gerard, and Clemens van Woerkens. "Skills and Creativity in a Cross-Section of Dutch Cities." Discussion Paper Series 04-29(2004).
- Matthiessen, Christian Wichmann. "The Öresund Area: Pre- and Post-Bridge Cross-Border Functional Integration: The Bi-National Regional Question." GeoJournal 61.1 (2005): 31-39.
- McGranahan, David, and Timothy Wojan. "Recasting the Creative Class to Examine Growth Processes in Rural and Urban Counties." Regional Studies: The Journal of the Regional Studies Association 41 (2007): 197-216.
- Mellander, Charlotta, and Halfeng Qian. "Creative China? The University, Tolerance and Talent in Chinese Regional Development."
- Peach, James T., and Richard V. Adkisson. "Nafta and Economic Activity Along the U.S.-Mexico Border." Journal of Economic Issues 34.2 (2000): 481-89.
- Qian, Halfeng. "Talent, Creativity and Regional Economic Performance: The Case of China." Annals of Regional Science (2008).
- Quacquarelli, Symonds. "Qs Safe National System Rankings". London, 2008.
<http://www.topuniversities.com/worlduniversityrankings/results/2008/safe_system_strength/>.
- Schmidt, Torben. "Cross-Border Regional Enlargement in Oresund." GeoJournal 64 (2005): 249-58.
- Scott, Allen J. "Capitalism and Urbanization in a New Key? The Cognitive-Cultural Dimension." Social Forces 85.4 (2007): 1465-82.
- Wong, Poh-Kam, Yuen-Ping Ho, and Annette Singh. "Towards an "Entrepreneurial University" Model to Support Knowledge-Based Economic Development: The Case of the National University of Singapore " World Development 35.6 (2007): 941-58.

Author Bio

Charlotta Mellander is Research Director of the Prosperity Institute of Scandinavia, Jönköping International Business School, charlotta.mellander@ihh.hj.se.

Patrick Adler is Research Assistant of the Martin Prosperity Institute in the Rotman School of Management, University of Toronto, patrick.adler@rotman.utoronto.ca.

Working Paper Series

The MPI is dedicated to producing research that engages individuals, organizations and governments. We strive to make as much research as possible publicly available.

Our research focuses on developing data and new insight about the underlying forces that power economic prosperity. It is oriented around three main themes: economic performance, place, and creativity.

Disclaimer

The views represented in this paper are those of the author and may not necessarily reflect the views of the Martin Prosperity Institute, its affiliates or its funding partners.

Any omissions or errors remain the sole responsibility of the author. Any comments or questions regarding the content of this report may be directed to the author.