

Understanding migration – The case of Bornholm

Carl Henrik Marcussen

Centre for Regional and Tourism Research,
Bornholm, Denmark, www.crt.dk

ISISA conference, Gudhjem, 23-26/8 2010

Abstract

This paper compares the characteristics of people moving from and into a given location. The focus is on the Danish island of Bornholm. The data used for this study is personal and family level information about persons residing in Denmark in two different years. Specifically, register data from the national statistical authorities, Statistics Denmark for the years 2002 and 2007 will be applied. The two sets of data are merged into one dataset, which will then consist of a section of 2002-variables, a section of 2007-variables, and a set of change variables. Personal level and family level characteristics like age, education, gender, employment status, income, home and second home ownership, are among the socio-demographic characteristics which may have an impact on the probability of (mostly domestic) emigration and immigration, respectively.

Basic descriptive statistics will be shown for emigrants and immigrants (and possible those who did not move), and simple t-tests will show in which respects emigrants and immigrants are different. However, the main analytical tool used in this paper is binomial logistic regression, but for comparison the analyses will also be run using linear regression. In a first linear and a logistic regression analysis, the dependent variable will be “1” for those who have immigrated, “0” for all others. There will be a second regression analysis in a linear and logistic variant, but for migration. There will then be a set of explanatory variables, i.e. factors which, to a varying degree, affects probability of emigration and immigration, respectively. Different indicators of the attractiveness of the old and new area of residence may be included. - The set of explanatory variables developed and applied for the island of Bornholm may be applied to any one of the major 98 communes including several islands, any of 10 or 11 lands, and any of 5 regions, in Denmark.

Overview

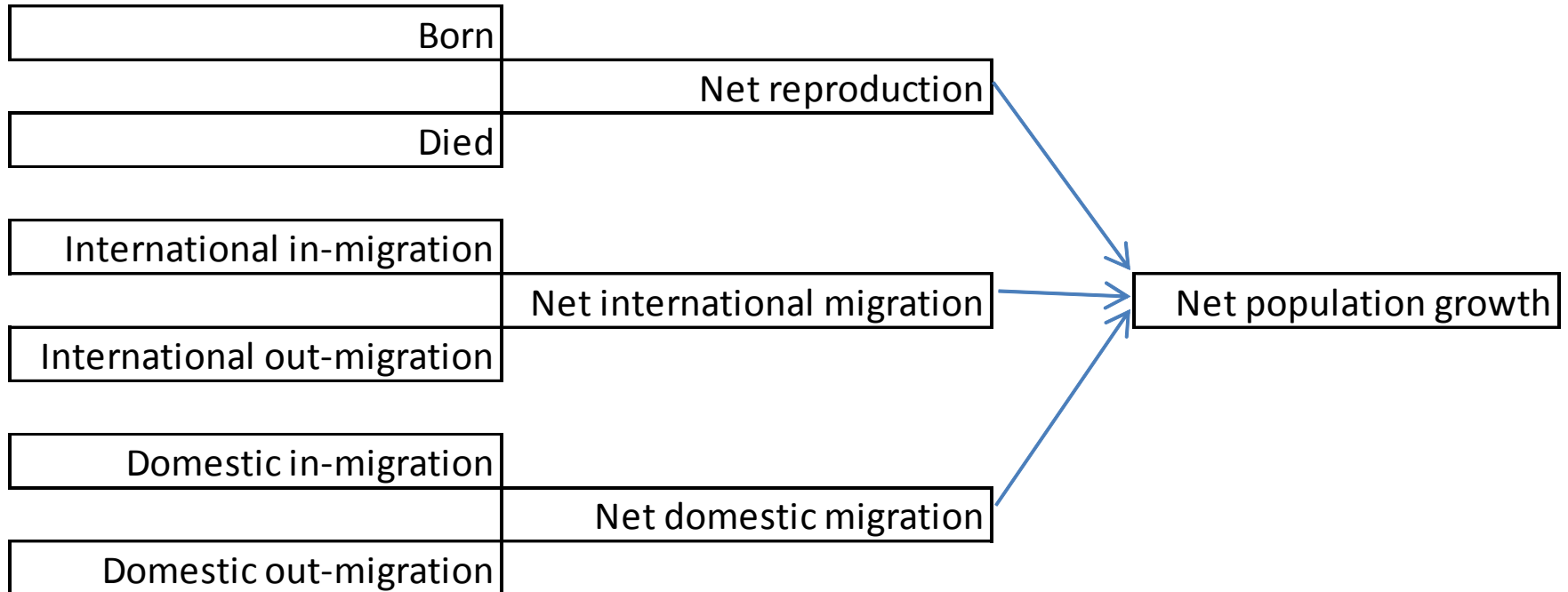
1. Introduction
2. Population growth and migration
3. International immigration to DK and Bornholm
4. Domestic migration between municipalities
5. Conclusion / summary – followed by discussion

1. Introduction

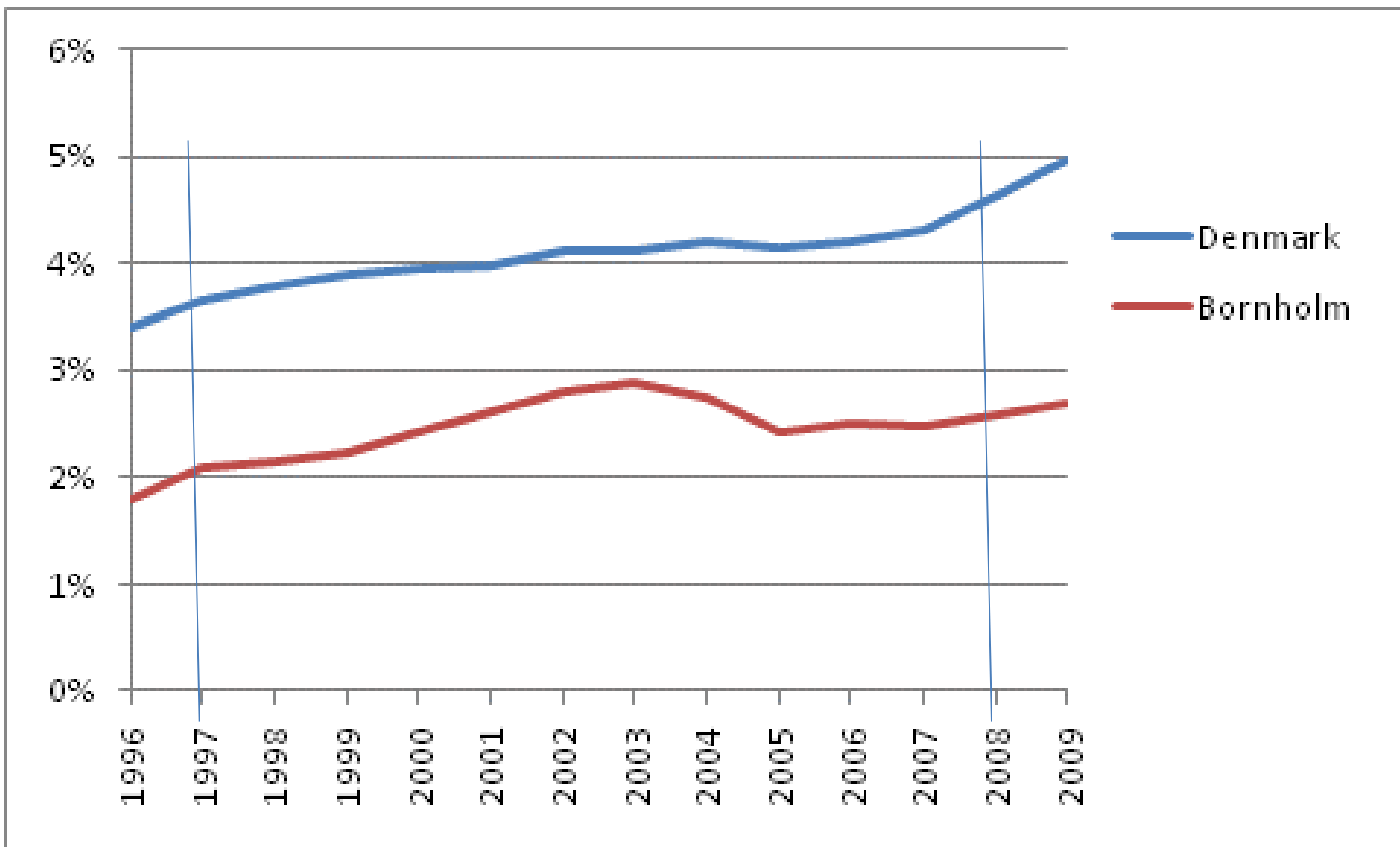
The purpose of this paper is to:

- 1. Show the role of migration in net population changes –**
in principle, in Denmark, and on Bornholm
- 2. Briefly show the development in international
immigration** to Denmark – and Bornholm
- 3. Describe and explain domestic migration** in Denmark and
to or from Bornholm

Population growth and migration

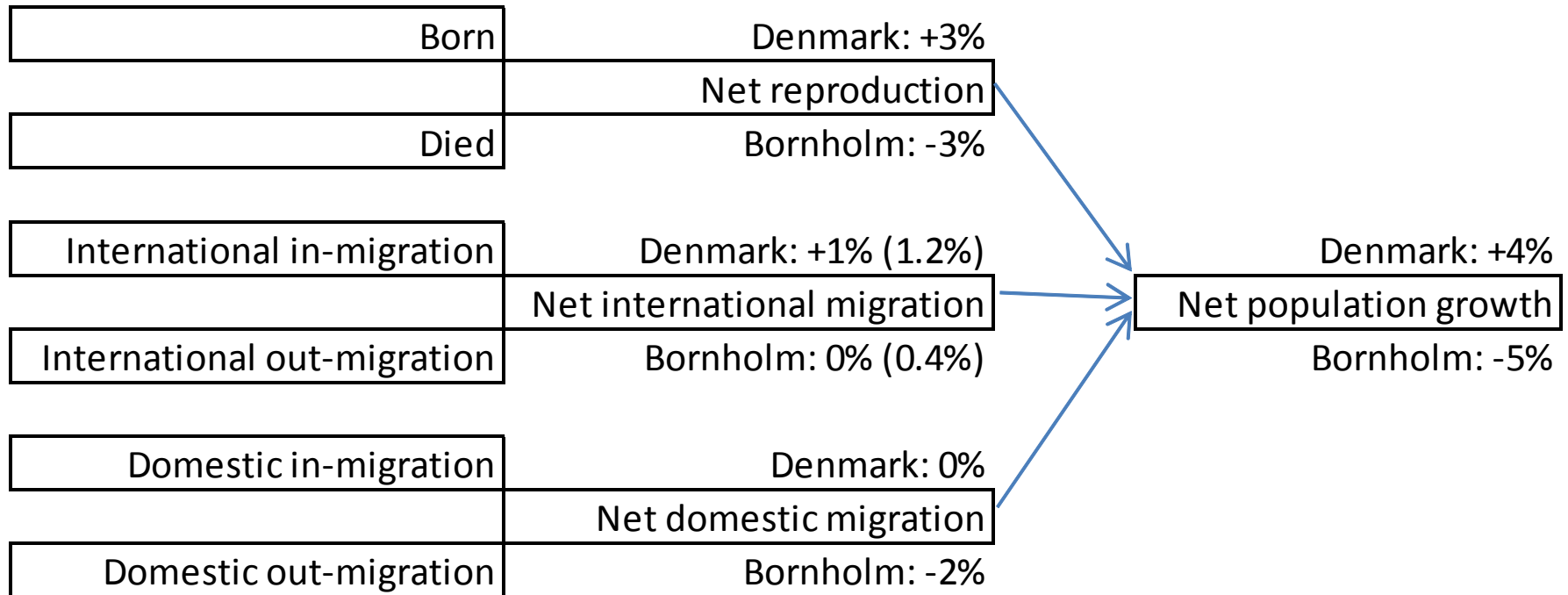


Foreign immigrants – share of population



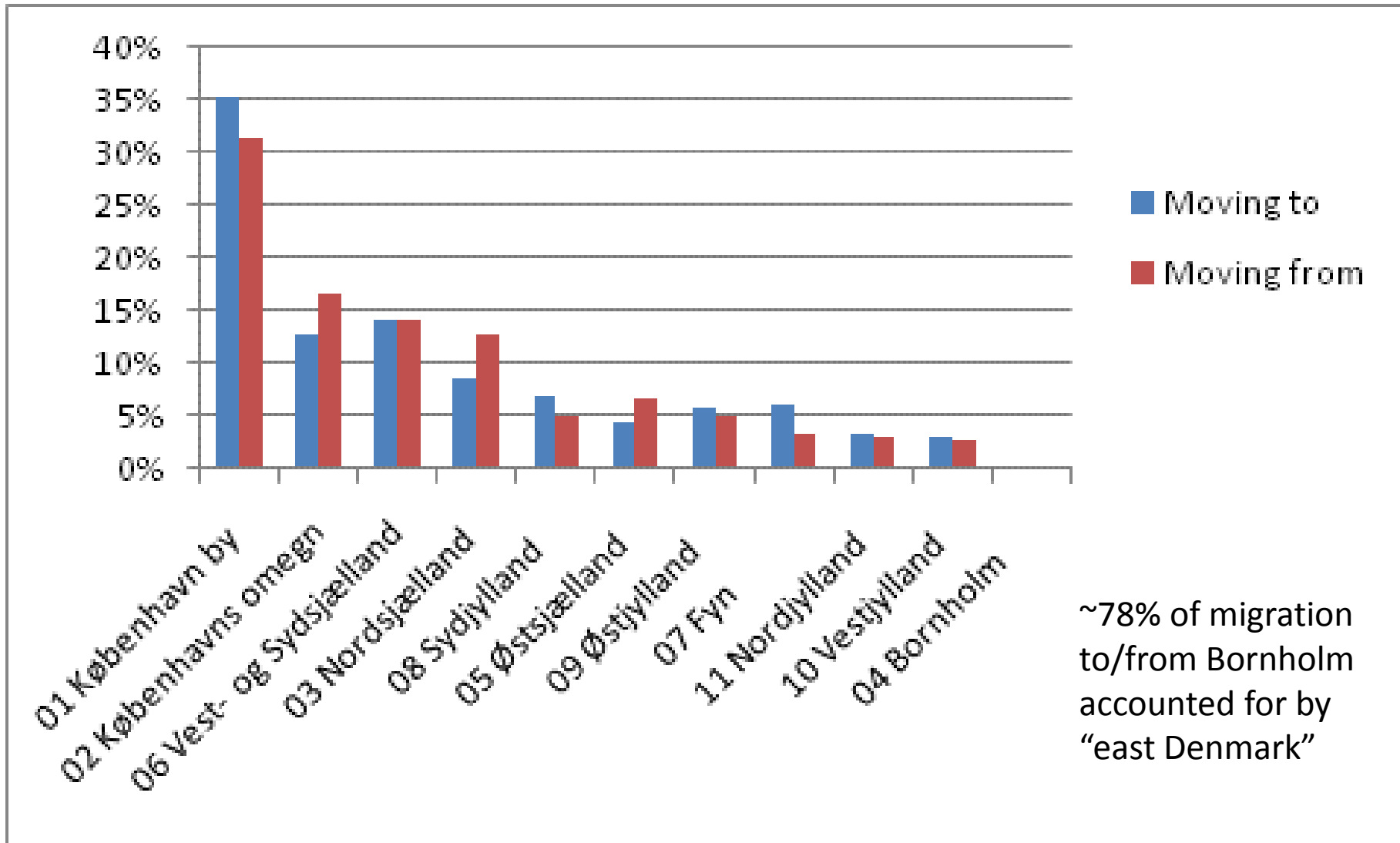
Note: 1 Jan. 1997 to 1 Jan. 2008 on this graph corresponds to 31 Dec. 1996 – 31 Dec. 2007 on the next slide.

Population growth and migration – Denmark and Bornholm, 1996-2007

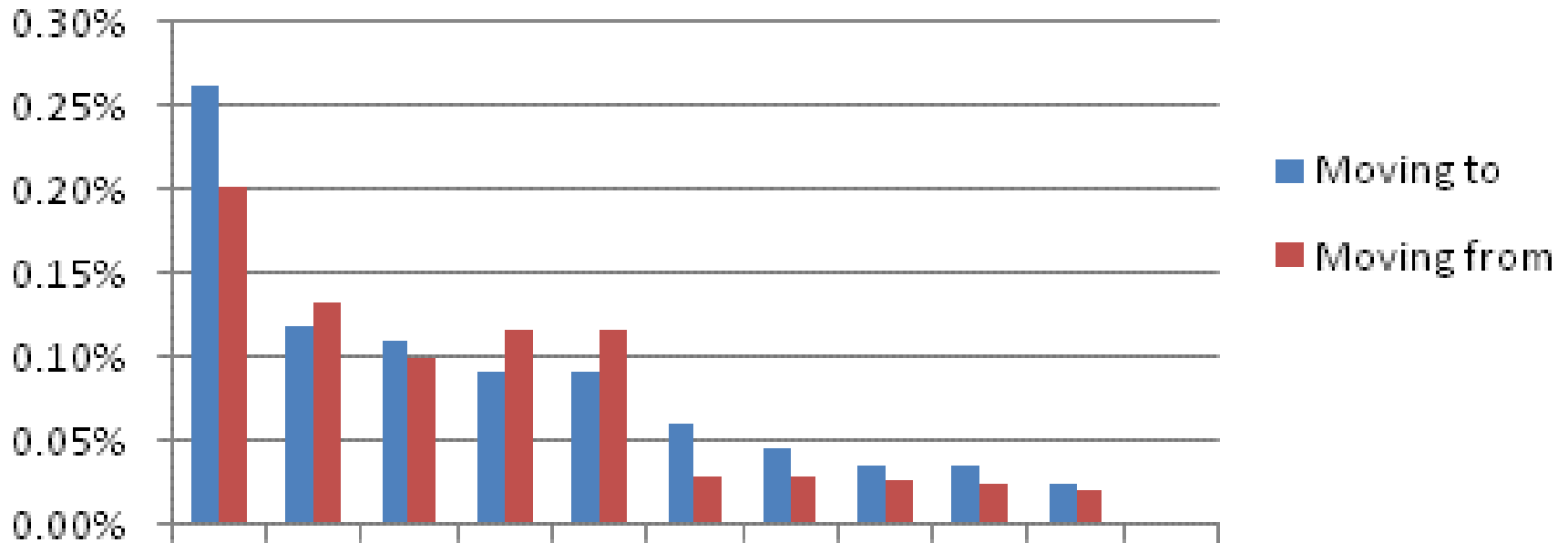


Note: The period is 31 Dec. 1996 – 31 Dec. 2007 , i.e. end of year numbers.

Domestic migration to/from Bornholm – from end of 2002 to end of 2007



Domestic migration to/from Bornholm – from end of 2002 to end of 2007



Near “lands” – those east of the Great Belt - dominate migration to/from Bornholm.

Method – and factors analyzed – and more

Data and method:

Quantitative
analysis of data from
Statistics Denmark.

Period, 5 years:

(End of) 2002 to
(end of) 2007.

1	Income difference
2	Income 2002
3	Income 2007
4	Change in social position
5	Change in family composition
6	Change in highest finished education
7	Change in ongoing education
8	Age in 2002
9	Age in 2007
10	Gender
11	Working in 2002
12	Working in 2007
13	Any work change
14	left jobmarket
15	entered jobmarket
16	Changed work municipality
17	was a pendler in 2002
18	was a pendler in 2007
19	Married 2002
20	Divorced/widowed 2002
21	Got married 2003-2007
22	Got divorced/widowed 2003-2007
x	Lived on Bornholm 1996-2001 at all
	Cheaper housing
	Second home ownership
	Parish of birth

Results

	Denmark	Bornholm	
	All of DK	Moved out B'02not'07	Moved in B'07not'02
Change in family composition	-608	-77	-39
Changed work municipality	-464	-97	-94
Any work change	-462	-69	-60
Was a pendler in 2002	-415	-58	-54
Age in 2007	315	46	21
Age in 2002	315	46	21
Married 2002	282	33	17
Change in highest finished education	-268	-48	-4
Change in ongoing education	-248	-47	-9
Got married 2003-2007	-202	-5	-24
Working in 2007	-166	-19	-3
entered jobmarket	-149	-28	-3
Change in social position	-133	-21	-12
Income 2002	132	30	-3
Divorced/widowed 2002	90	14	1
Working in 2002	-85	0	-10
was a pendler in 2007	-65	-17	-4
Income difference	-64	-20	5
left jobmarket	-17	4	-15
Got divorced/widowed 2003-2007	-8	1	1.6
Gender	-8	-1	0
Income 2007	1	7	0

Note: Rounded t-values. Based on persons living in Denmark both end of 2002 and end of 2007.

Results (t-values in t-tests)

	Denmark	Bornholm	
	All of DK	Moved out B'02not'07	Moved in B'07not'02
Change in family composition	-608	-77	-39
Changed work municipality	-464	-97	-94
Any work change	-462	-69	-60
Was a pendler in 2002	-415	-58	-54
Age in 2007	315	46	21
Age in 2002	315	46	21
Married 2002	282	33	17
Change in highest finished education	-268	-48	-4
Change in ongoing education	-248	-47	-9
Got married 2003-2007	-202	-5	-24
Working in 2007	-166	-19	-3
Entered jobmarket	-149	-28	-3
Change in social position	-133	-21	-12

Note: Rounded t-values. Based on persons living in Denmark both end of 2002 and end of 2007.

Results

	Bornholm	Bornholm	Bornholm	Bornholm
	Stayed	Moved OUT	Stayed	Moved IN
Change in family composition	21%	71%	21%	49%
Changed work municipality	2%	36%	2%	36%
Any work change	20%	66%	20%	63%
Was a pendler in 2002	55%	99%	55%	99%
Age in 2007	46.7	30.6	46.5	38.2
Age in 2002	41.7	25.6	41.5	33.2
Married 2002	46%	20%	46%	31%
Change in highest finished education	13%	41%	13%	16%
Change in ongoing education	22%	54%	22%	28%
Got married 2003-2007	4%	5%	4%	12%
Working in 2007	48%	63%	48%	51%
Entered jobmarket	9%	23%	9%	11%
Change in social position	22%	36%	22%	31%

	Bornholm	Bornholm	Bornholm	Bornholm
	Stayed	Moved OUT	Stayed	Moved IN
Change in family composition	21%	71%	21%	49%
Changed work municipality	2%	36%	2%	36%
Any work change	20%	66%	20%	63%
Was a pendler in 2002	55%	99%	55%	99%
Age in 2007	46.7	30.6	46.5	38.2
Age in 2002	41.7	25.6	41.5	33.2
Married 2002	46%	20%	46%	31%
Change in highest finished education	13%	41%	13%	16%
Change in ongoing education	22%	54%	22%	28%
Got married 2003-2007	4%	5%	4%	12%
Working in 2007	48%	63%	48%	51%
Entered jobmarket	9%	23%	9%	11%
Change in social position	22%	36%	22%	31%
Income 2002	187967	115499	187947	195125
Divorced/widowed 2002	15%	7%	15%	14%
Working in 2002	48%	47%	48%	56%
Was a pendler in 2007	54%	67%	54%	57%
Income difference	33909	80052	35458	23172
Left jobmarket	9%	7%	9%	16%
Got divorced/widowed 2003-2007	5%	4%	5%	4%
Gender	48%	49%	49%	48%
Income 2007	208650	188748	208630	209671
Lived on Bornholm 1996-2001 at all				
Cheaper housing				
Second home ownership				
Parish of birth				

Multiple regression results

	Adj. R Sq.: 0.1033		Adj. R Sq.: 0.2826		Adj. R Sq.: 0.342	
	All of Denmark		Left Bornholm		Came to Bornholm	
Variable	Parameter	t value	Parameter	t value	Parameter	t value
Intercept	0.038	85.87	0.036	7.91	0.058	14.24
Pendler2002	0.145	378.62	0.172	29.09	0.468	88.13
Left_jobmarket	0.125	240.68	0.153	22.72	0.447	76.61
Pendler2007	-0.062	-166.59	-0.048	-8.44	-0.355	-65.39
Changed workkom	0.152	421.36	0.508	85.74	0.308	51.44
Entered_jobmarket	-0.007	-13.67	0.029	4.49	-0.329	-50.46
Age 2002	-0.001	-86.70	-0.002	-15.46	-0.002	-19.53
Got married	0.072	129.88	0.029	4.14	0.084	14.18
Ongoing education	-0.006	-14.52	0.001	0.27	-0.038	-8.28
Highest education	0.035	81.84	0.059	12.45	-0.020	-4.48
Was divorc_wid '02	-0.022	-42.32	-0.005	-0.90	0.014	2.99
Got_divorc_wid	0.045	67.75	0.023	3.58	0.010	1.76
Was married 2002	-0.036	-91.74	-0.001	-0.32	0.005	1.35

Summary (1)

During 11 years, from end of 1996 to the end of 2007, the population on Bornholm declined by 5%, whereas during the same period the population in Denmark overall increased by 4%. The decline in population on Bornholm was due to a minus of 3% in net reproduction, and a minus of 2 percent in net domestic migration, whereas net international migration had little impact on the population development on Bornholm.

During the 5 year period from end of 2002 to end of 2007, most of domestic migration to/from Bornholm – namely 78% - was to/from lands to the east of the Great Belt. Copenhagen city alone – with its many educational institutions - accounted for 35% of domestic migration from Bornholm during the period.

The analysis of the reasons for domestic migration between municipalities is based on a comparison of the situation in 2002 and 2007, and changes between the two. In Denmark overall, migration is very often associated with a change in the family composition. This is less frequently the case when people move to Bornholm, since this can more often be done with the family composition intact.

When looking at the reasons why people move to or from Bornholm, the most important reason is change of work municipality. This does both for domestic out-migration from Bornholm and in-migration to Bornholm.

Summary (2)

Those who were commuting (here referred to as pendling) in 2002 had generally moved by the end of 2007. This goes for Denmark overall as well as for out-migration from Bornholm and in-migration to Bornholm.

Those who are relatively old are generally less likely to migrate than the relatively young. Those who move from Bornholm are younger, in average, than those who move to Bornholm.

Those who were already married in 2002 are less likely to have moved by 2007. This is the case for Denmark overall as well as for people moving from Bornholm. It is less frequently the case for people moving to Bornholm. I.e. a rather high proportion of people moving to Bornholm were married before moving, namely as many as 31%, whereas only 20% of the people who had moved from Bornholm by 2007, were already married in 2002. So, Bornholm is a relatively popular place for married people to move to.

Those who got married during the period 2002-2007 are rather likely to have moved to Bornholm by the end of the period.

Educational reasons are strong drivers for (young) people moving from Bornholm. Among those who moved to Bornholm in 2003 to 2007, 13% had lived on the island during part of or all of the period 1996-2001. By definition they did not stay on Bornholm in 2002. So, connection to Bornholm plays a role for a portion of those moving to Bornholm.

Summary (3)

A relatively high proportion of those who moved to Bornholm, namely 16%, left the job market from end of 2002 to end of 2007, while this was only the case for 7% of those who left Bornholm, and for 9% of those who remained on the island.

Those who out-migrated had a relatively large increase in their gross income, whereas this was not the case for those who moved to Bornholm.

Looking at all the factors which might have triggered in-migration to Bornholm, those who commuted (pendled) from Bornholm by the beginning of the period are most likely to have moved to Bornholm by the end of the five year period in focus. Also, those who have left the jobmarket are overrepresented among those migrating to Bornholm.

Those who commuted by 2007 are unlikely to have moved to Bornholm. I.e., people who move to Bornholm do not plan to commute to work elsewhere in Denmark, while living on Bornholm. Those who have changed workplace from one municipality to Bornholm are likely to have moved. This means that many of those who move to Bornholm has work already. On the other hand, those who had taken their first job – on Bornholm – typically stayed there already, i.e. they did not move to enter the jobmarket on Bornholm.

Implications

Bornholm is a good place for families in the sense that established families may move to the island. Also Bornholm is popular for establishing or for newly established families. Pending on job-opportunities the good and safe environment for raising children may be emphasized.

Also it is popular for those leaving or those having left the job market to move to Bornholm. The relatively low prices of property is an incentive for in-migration.

To avoid commuting, support for entrepreneurs, or distance working may be feasible.

To start further education is a common reason for young people to leave the island. Thus, if more educational offers were available, by face-to-face teaching and/or by distance learning, more young people might remain on the island.

The largest airport in the country may be reached in half an hour from Bornholm, by air, and the centre of Copenhagen may be reached in 3 hours by surface transport. This relatively short transportation time have been in place for 10 years. The fact that Bornholm is within relatively easy reach may be emphasised more.

Thank you for your attention!

Comments ?

Questions ?