

Handelshøgskolen

## **The Competitive Advantage of Nations:**

*Has the Icelandic whitefish fillet industry created and sustained superior performance over the Norwegian industry?*

—

**David Bragi Björgvinsson**

*Masteroppgave i økonomi og administrasjon - august 2014*

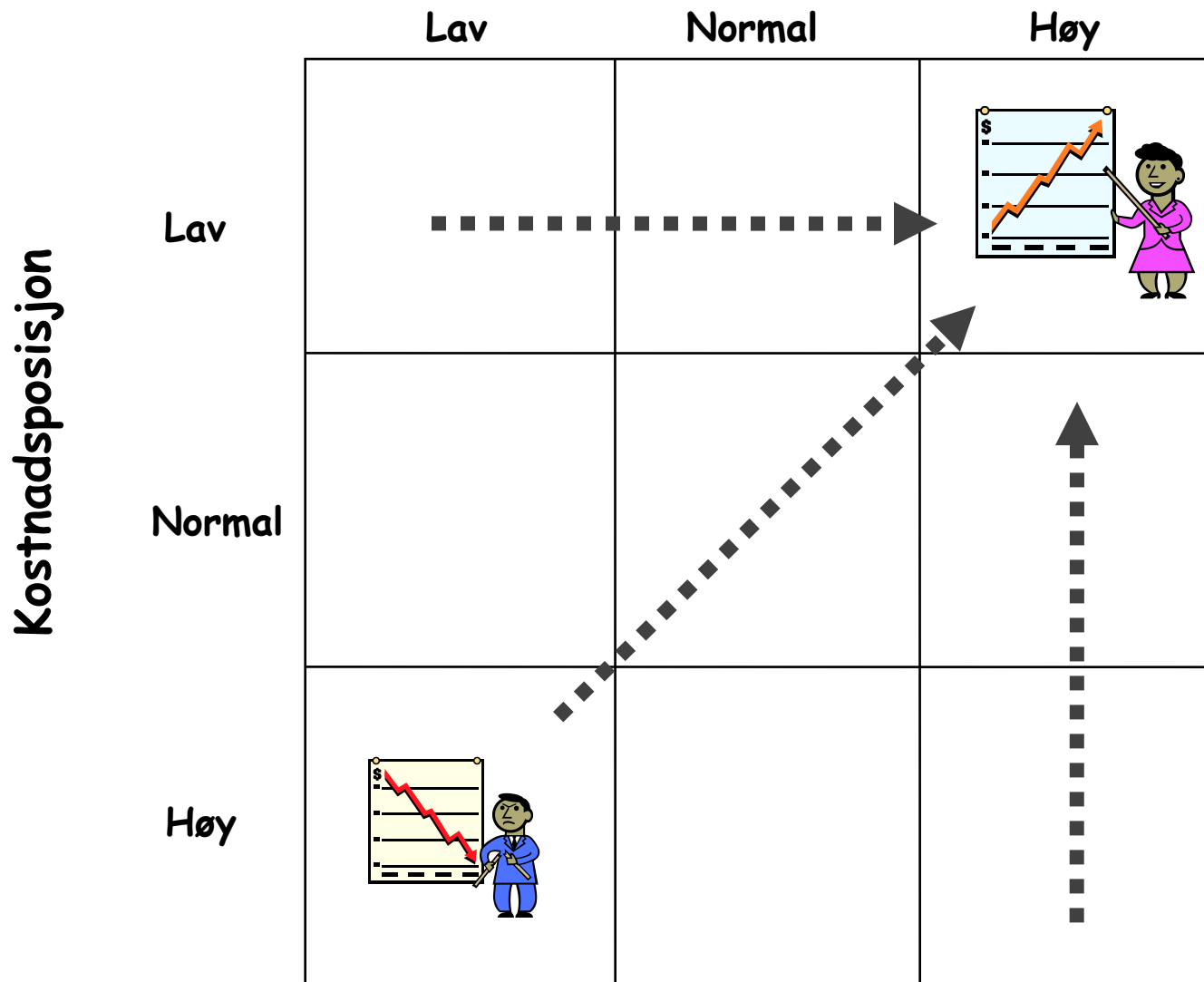
# Utgangspunkt

- Filetindustrien på Island og i Norge har i mange tiår produsert tilnærmet like produkter fra samme arter.
- Islandske filetindustri er betraktet som sterk og lønnsom.
- Norsk filetindustri er ikke hva den en gang var og sliter økonomisk.

# Forskningsspørsmål

- Har islandsk filetindustri utviklet varige konkurransefortrinn?
- I så fall;
  - Hvilke fortrinn er dette?
  - Kan de kopieres?

# Verdiposisjon

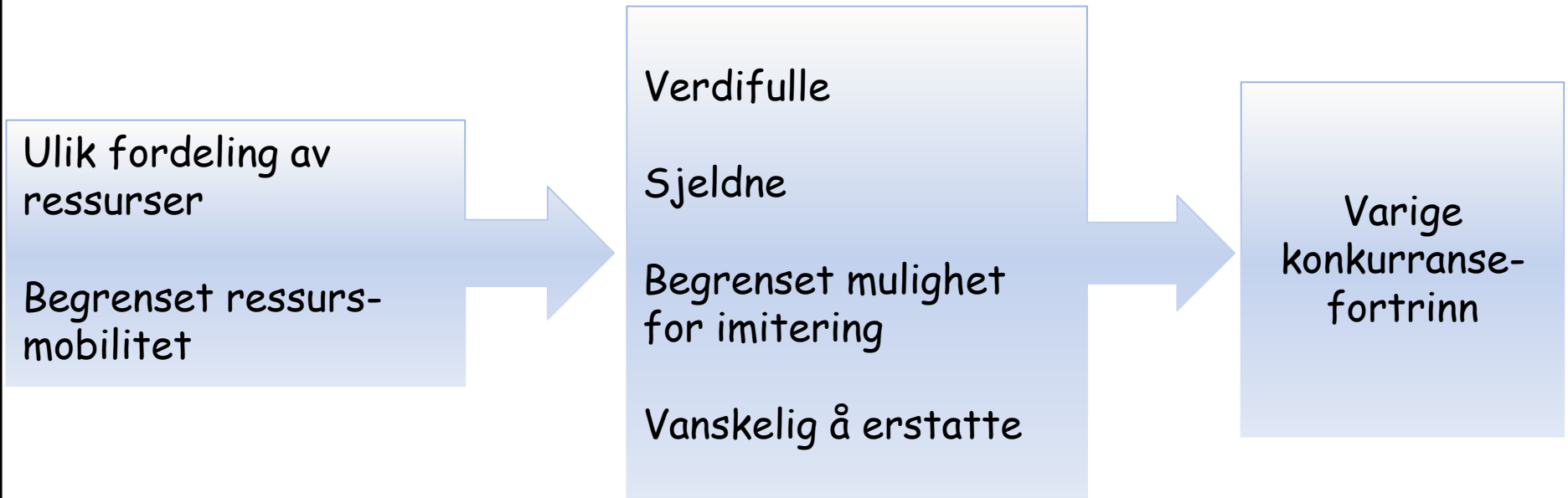


Hunt & Morgan

Styringsgruppemøte Torskeprogrammet

10.02.15

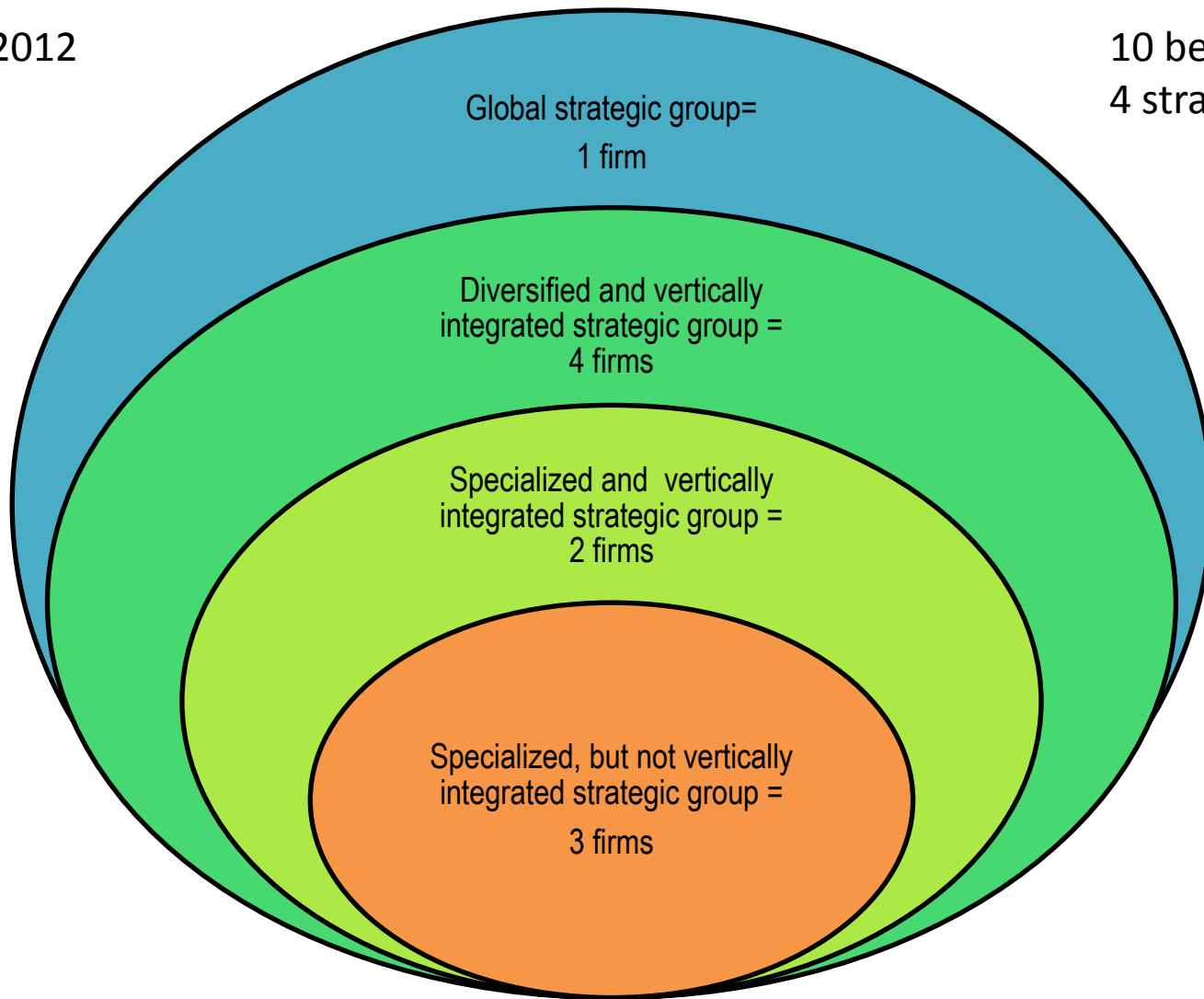
# Varige konkurransefortrinn i islandsk filetindustri



# Tallmateriale fra Island

2003-2012

10 bedrifter  
4 strategiske grupper



**Table 1.** Value contribution of exported fishing goods on total value of export

	Iceland	Norway
<b>2000</b>	49,9 %	5,7 %
<b>2001</b>	47,5 %	5,6 %
<b>2002</b>	46,7 %	5,8 %
<b>2003</b>	46,7 %	5,2 %
<b>2004</b>	47,5 %	4,9 %
<b>2005</b>	47,6 %	4,7 %
<b>2006</b>	43,6 %	4,4 %
<b>2007</b>	35,5 %	4,5 %
<b>2008</b>	30,1 %	3,9 %
<b>2009</b>	34,7 %	5,9 %
<b>2010</b>	33,4 %	6,7 %
<b>2011</b>	34,2 %	5,8 %
<b>2012</b>	35,2 %	5,4 %

Source: Statistic Iceland, Statistic Norway.

**Table 2.** Percentage share of exported whitefish fillets and unprocessed whitefish, t  
 Source: Federation of Icelandic Fish Processing Plants and Norwegian Seafood Council.

	<i>Fresh fillets</i>		<i>Frozen fillets</i>		<i>Fresh whole</i>		<i>Frozen whole</i>	
	Iceland	Norway	Iceland	Norway	Iceland	Norway	Iceland	Norway
2003	17,8 %	2,5 %	55,0 %	28,1 %	25,0 %	35,7 %	2,2 %	33,6 %
2004	18,9 %	4,1 %	47,2 %	26,2 %	31,9 %	32,7 %	2,0 %	37,0 %
2005	21,5 %	4,7 %	44,3 %	24,4 %	32,7 %	27,2 %	1,4 %	43,7 %
2006	22,5 %	4,4 %	43,5 %	20,8 %	32,2 %	26,0 %	1,9 %	48,9 %
2007	18,8 %	4,9 %	44,2 %	18,5 %	33,4 %	23,9 %	3,6 %	52,7 %
2008	20,1 %	4,2 %	30,5 %	21,3 %	45,6 %	20,8 %	3,8 %	53,7 %
2009	26,9 %	4,3 %	28,6 %	15,8 %	42,3 %	20,2 %	2,1 %	59,7 %
2010	32,8 %	4,0 %	40,4 %	16,8 %	25,0 %	24,5 %	1,7 %	54,8 %
2011	31,1 %	3,1 %	50,3 %	12,8 %	17,3 %	23,8 %	1,3 %	60,3 %
2012	36,4 %	3,2 %	45,0 %	11,3 %	18,0 %	24,0 %	0,6 %	61,5 %



<b>Årsregnskap (Statement of income)</b> <i>(tall i millioner \$)</i>		
Sales Revenue	Salgsinntekter	\$20,438
<b>A. Operating Revenue</b>	<b>A. Driftsinntekter</b> <i>Omsetning</i>	<b>\$20,438</b>
Cost of goods sold	Varekostnader	\$7,943
Selling, general and administrative expenses	Salgskostnader	\$8,172
Other expenses	Andre kostnader	\$138
<b>B. Operating Expenses (OPEX)</b>	<b>B. Driftskostnader</b>	<b>\$16,253</b>
<b>A-B. Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA)</b>	<b>A-B. Driftsresultat</b> <i>Driftsoverskudd</i>	<b>\$4,185</b>
Depreciation and amortization	Avskrivninger og nedskrivninger	\$960
Impairment losses	Tap	\$100
Total operating expenses	Totale driftskostnader	\$17,313
<b>Operating income</b> <i>Operating profit</i>	<b>Driftsresultat</b>	<b>\$3,125</b>
Non-operating income	Annen inntekt	\$130
<b>Earnings before Interest and Taxes (EBIT)</b>	<b>Totalresultat (EBIT)</b>	<b>\$3,255</b>
Net interest expense/income	Netto renteutgift/-inntekt	\$145
<b>Earnings before income taxes</b>	<b>Resultat før skatt</b>	<b>\$3,110</b>
Income taxes	Skatt	\$1,027
<b>Net Income</b> <i>Net profit</i>	<b>Årsresultat</b> <i>Resultat etter skatt</i>	<b>\$2,083</b>

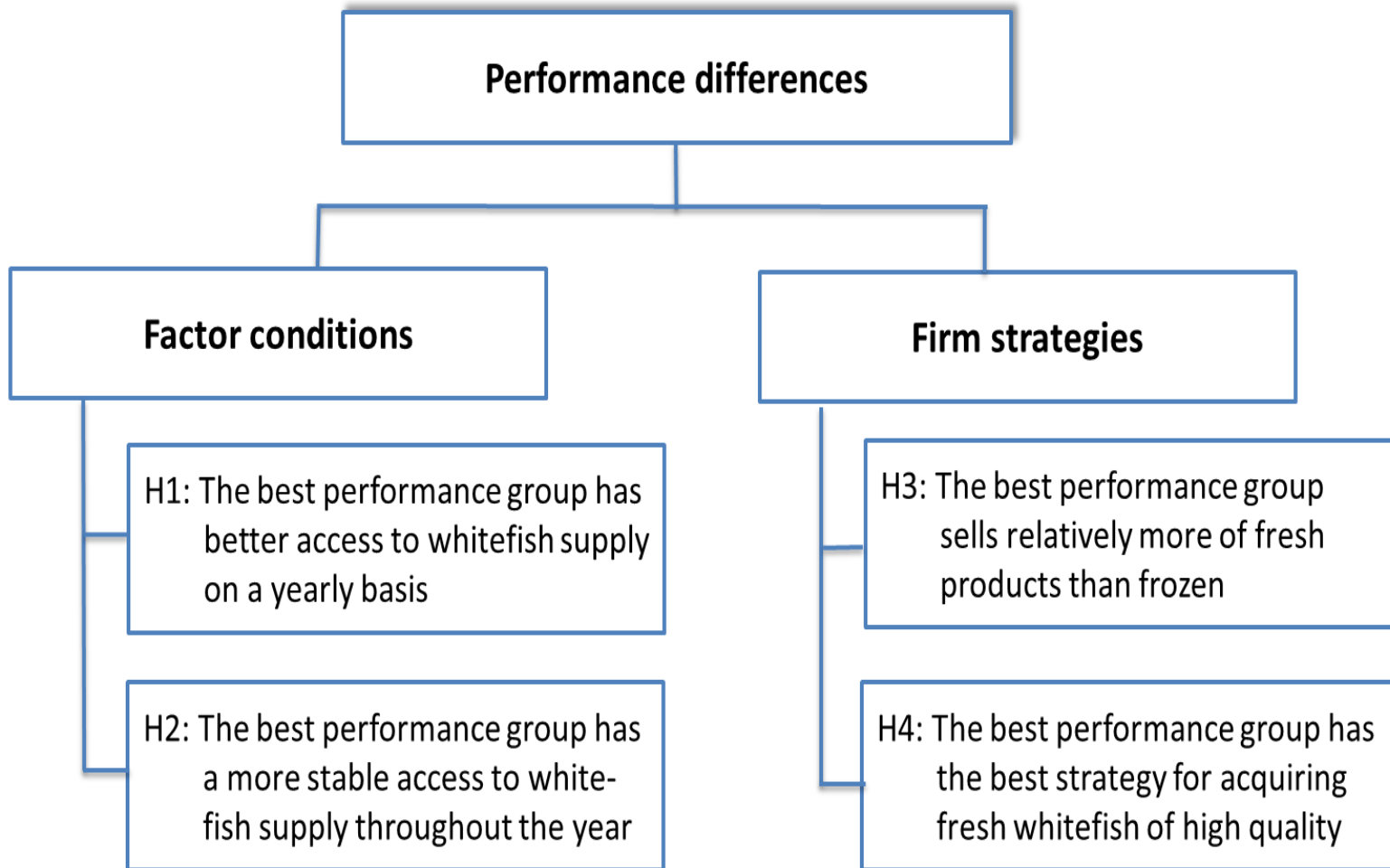
## Har islandsk filetindustri utviklet varige konkurransefortrinn?

**Table 3.** Profitability differences between the Icelandic and Norwegian performance groups (weighted average).  
Source: PSFPI for the Norwegian population and Annual yearly statements for the Icelandic sample.

<i>EBITDA/Total Assets</i>				<i>EBITDA/Total Assets</i>			
<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>	<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>
Iceland 1	13,49 %	0,0017	****	Iceland 2	12,36 %	0,0020	****
Norway	2,98 %	0,0006		Norway	2,98 %	0,0006	
<i>EBIT/Total Assets</i>				<i>EBIT/Total Assets</i>			
<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>	<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>
Iceland 1	8,36 %	0,0015	****	Iceland 2	7,79 %	0,0020	****
Norway	0,04 %	0,0005		Norway	0,04 %	0,0005	
<i>EBT/Total Assets</i>				<i>EBT/Total Assets</i>			
<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>	<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>
Iceland 1	5,5 %	0,0033	***	Iceland 2	3,62 %	0,0059	**
Norway	-2,0 %	0,0010		Norway	-1,98 %	0,0010	
<i>Net Profit/Total Equity</i>				<i>Net Profit/Total Equity</i>			
<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>	<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>
Iceland 1	13,8 %	0,0220	*	Iceland 2	7,8 %	0,0485	-
Norway	0,4 %	0,0189		Norway	0,4 %	0,0189	
* P < 10 %, ** P < 5 %, *** P < 1 %, **** P < 0,1 %				* P < 10 %, ** P < 5 %, *** P < 1 %, **** P < 0,1 %			

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<b>EBITDA/Total Assets</b>				<b>EBITDA/Total Assets</b>			
<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>	<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>
Iceland 3	10,84 %	0,0036	***	Iceland 4	10,53 %	0,0136	*
Norway	2,98 %	0,0006		Norway	2,98 %	0,0006	
<b>EBIT/Total Assets</b>				<b>EBIT/Total Assets</b>			
<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>	<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>
Iceland 3	7,27 %	0,0043	***	Iceland 4	6,12 %	0,0141	-
Norway	0,04 %	0,0005		Norway	0,04 %	0,0005	
<b>EBT/Total Assets</b>				<b>EBT/Total Assets</b>			
<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>	<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>
Iceland 3	-1,06 %	0,0327	-	Iceland 4	-2,96 %	0,0374	-
Norway	-1,98 %	0,0010		Norway	-1,98 %	0,0010	
<b>Net Profit/Total Equity</b>				<b>Net Profit/Total Equity</b>			
<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>	<i>Groups</i>	<i>Mean</i>	<i>Variance</i>	<i>Significance</i>
Iceland 3	43,7 %	2,1696	-	Iceland 4	1095,0 %	900,317923	-
Norway	0,4 %	0,0189		Norway	0,4 %	0,0189	
* P < 10 %, ** P < 5 %, *** P < 1 %, **** P < 0,1 %				* P < 10 %, ** P < 5 %, *** P < 1 %, **** P < 0,1 %			



**Hypothesis 1:** The best performance group is located in the nation where access to whitefish on a yearly basis is highest.

	<b>Cod</b>			<b>Haddock</b>			<b>Saithe</b>		
	<i>Iceland</i>	<i>Norway</i>	<i>Diff.</i>	<i>Iceland</i>	<i>Norway</i>	<i>Diff.</i>	<i>Iceland</i>	<i>Norway</i>	<i>Diff.</i>
<i>2003</i>	200 443	217 362	-16 919	59 984	59 329	655	51 855	212 228	-160 373
<i>2004</i>	220 057	230 746	-10 689	83 696	64 932	18 764	62 631	211 267	-148 636
<i>2005</i>	206 376	225 775	-19 399	95 839	63 337	32 502	67 274	230 567	-163 293
<i>2006</i>	193 404	221 299	-27 895	96 101	71 412	24 689	75 204	256 856	-181 652
<i>2007</i>	167 159	217 789	-50 630	108 199	73 286	34 913	64 008	225 464	-161 456
<i>2008</i>	143 860	215 444	-71 584	101 606	74 299	27 307	69 992	227 295	-157 303
<i>2009</i>	181 322	243 659	-62 337	81 388	106 324	-24 936	61 115	202 377	-141 262
<i>2010</i>	167 547	283 481	-115 934	63 880	124 696	-60 816	53 718	228 114	-174 396
<i>2011</i>	169 300	340 167	-170 867	49 316	159 550	-110 234	50 387	190 344	-139 957
<i>2012</i>	193 560	357 951	-164 391	45 670	160 977	-115 307	50 848	176 471	-125 623
<i>Acc.</i>	1 843 028	2 553 673	-710 645	785 679	958 142	-172 463	607 032	2 160 983	-1 553 951
<i>Mean</i>	184 303	255 367	-71 065	78 568	95 814	-17 246	60 703	216 098	-155 395
<i>Std.</i>	22 703	53 474	59 896	22 479	39 663	58 477	8 725	22 823	16 826
<i>Significance*</i>			***			-			***

**Hypothesis 2:** The best performance group is located in the nation where the whitefish supply throughout the year is less volatile.

	<b>Cod</b>				<b>Haddock</b>				<b>Saithe</b>			
	<i>Iceland</i>	<i>SD</i>	<i>Norway</i>	<i>SD</i>	<i>Iceland</i>	<i>SD</i>	<i>Norway</i>	<i>SD</i>	<i>Iceland</i>	<i>SD</i>	<i>Norway</i>	<i>SD</i>
<i>Jan</i>	8,0%	1,0%	10,1%	2,4%	8,0%	1,6%	6,2%	2,1%	5,0%	0,6%	4,4%	0,6%
<i>Feb</i>	11,1%	1,4%	15,5%	2,5%	10,1%	1,4%	7,7%	2,8%	6,2%	0,9%	13,6%	2,1%
<i>Mar</i>	13,9%	1,3%	23,9%	3,7%	12,0%	2,0%	9,0%	2,8%	8,1%	0,7%	15,8%	1,8%
<i>Apr</i>	8,8%	1,2%	13,8%	2,4%	9,4%	1,3%	11,7%	1,8%	8,6%	1,6%	7,6%	1,5%
<i>May</i>	8,7%	1,2%	5,6%	1,2%	8,8%	1,5%	7,1%	2,2%	8,7%	2,1%	9,5%	2,3%
<i>Jun</i>	5,7%	0,6%	4,5%	1,1%	4,9%	1,3%	6,1%	1,5%	7,5%	2,0%	9,0%	1,5%
<i>Jul</i>	4,8%	0,4%	3,4%	0,7%	5,4%	1,1%	7,0%	2,6%	9,7%	2,4%	6,6%	2,4%
<i>Aug</i>	5,9%	0,6%	3,0%	0,7%	7,7%	2,1%	8,3%	2,2%	10,3%	1,6%	8,7%	2,0%
<i>Sep</i>	7,2%	1,0%	2,6%	0,6%	7,7%	0,7%	7,2%	2,1%	8,5%	2,4%	8,0%	0,6%
<i>Oct</i>	8,7%	1,3%	3,4%	1,0%	9,2%	1,9%	9,2%	2,9%	9,9%	1,7%	6,2%	1,7%
<i>Nov</i>	9,4%	1,2%	6,6%	1,2%	9,6%	2,2%	11,3%	2,5%	9,5%	1,5%	5,6%	1,5%
<i>Dec</i>	7,9%	0,7%	7,7%	1,4%	7,2%	1,6%	9,0%	1,2%	8,0%	1,5%	4,9%	0,8%
<i>Sign.*</i>				**				-				*

*Hypothesis 3a: The best performance group sells relatively more of fresh products than frozen.*

	<b>Cod</b>						<b>Haddock</b>						<b>Saithe</b>					
	Volume fresh			Volume frozen			Volume fresh			Volume frozen			Volume fresh			Volume frozen		
	Iceland	Norway	Diff.	Iceland	Norway	Diff.	Iceland	Norway	Diff.	Iceland	Norway	Diff.	Iceland	Norway	Diff.	Iceland	Norway	Diff.
2003	7 830	1 948	5 882	21 938	23 454	-1 516	2 628	765	1 863	5 136	6 570	-1 434	198	1 431	-1 233	5 796	16 360	-10 564
2004	11 336	3 056	8 280	24 373	20 620	3 753	4 017	1 416	2 601	7 124	6 454	670	197	2 066	-1 869	7 330	14 557	-7 227
2005	11 131	4 197	6 934	21 623	19 947	1 676	6 323	1 691	4 632	7 345	5 461	1 884	196	2 069	-1 873	7 423	15 630	-8 207
2006	11 467	4 776	6 691	21 098	18 953	2 145	6 818	1 420	5 398	6 560	6 432	128	270	1 833	-1 563	8 186	12 694	-4 508
2007	8 973	4 770	4 203	20 072	15 184	4 888	6 076	1 141	4 935	8 243	4 981	3 262	176	2 068	-1 892	7 574	10 176	-2 602
2008	8 849	4 434	4 415	10 693	14 327	-3 634	6 460	1 211	5 249	6 651	6 223	428	368	1 250	-882	6 391	14 330	-7 939
2009	13 129	7 037	6 092	9 044	15 331	-6 287	5 809	1 021	4 788	5 836	9 784	-3 948	656	573	83	5 919	6 852	-933
2010	13 113	6 416	6 697	10 344	20 087	-9 743	4 882	1 711	3 171	6 977	10 370	-3 393	1 303	787	516	6 432	7 195	-763
2011	13 346	5 708	7 638	18 205	17 615	590	4 142	1 519	2 623	5 820	8 944	-3 124	1 321	351	970	6 448	4 287	2 161
2012	16 566	5 409	11 157	16 681	14 629	2 052	4 202	1 660	2 542	4 622	7 225	-2 603	1 001	219	782	5 566	4 015	1 551
Acc.	115 740	47 751	67 989	174 071	180 147	-6 076	51 357	13 555	37 802	64 314	72 444	-8 130	5 686	12 647	-6 961	67 065	106 096	-39 031
Mean	11 574	4 775	6 799	17 407	18 015	-608	5 136	1 356	3 780	6 431	7 244	-813	569	1 265	-696	6 707	10 610	-3 903
Std.	2610	1508	1991	5514	3086	4669	1366	315	1340	1087	1832	2448	471	739	1169	871	4731	4441
Sign.			***			-			***			-			**			**

*Hypothesis 3b: The best performance group sells more of fresh fillets in the second half of the year than the other performance group.*

	<b>Cod</b>			<b>Haddock</b>			<b>Saithe</b>		
	<i>Iceland</i>	<i>Norway</i>	<i>Diff.</i>	<i>Iceland</i>	<i>Norway</i>	<i>Diff.</i>	<i>Iceland</i>	<i>Norway</i>	<i>Diff.</i>
<i>2003</i>	4 273	630	3 643	1 274	594	680	83	800	-717
<i>2004</i>	6 364	806	5 558	1 803	1 047	756	96	1 068	-972
<i>2005</i>	5 847	1 332	4 515	3 304	800	2 504	83	954	-871
<i>2006</i>	5 161	1 646	3 515	3 062	738	2 324	99	786	-687
<i>2007</i>	4 482	1 698	2 784	3 030	571	2 459	75	849	-774
<i>2008</i>	3 878	1 816	2 062	2 605	642	1 963	208	624	-416
<i>2009</i>	6 748	2 815	3 933	2 417	596	1 821	337	327	10
<i>2010</i>	6 486	1 961	4 525	2 118	1 134	984	774	333	441
<i>2011</i>	7 440	1 709	5 731	1 985	851	1 134	583	231	352
<i>2012</i>	8 983	1 799	7 184	1 608	979	629	502	152	350
<i>Accumulated</i>	59 662	16 212	43 450	23 206	7 952	15 254	2 840	6 124	-3 284
<i>Mean</i>	5 966	1 621	4 345	2 321	795	1 525	284	612	-328
<i>Std.</i>	1578	611	1510	678	203	768	254	327	560
<i>Sign. two-tail *</i>			***			***			**



*Hypothesis 4: The best performance group acquires more whitefish caught on hooking gear than the other performance group.*

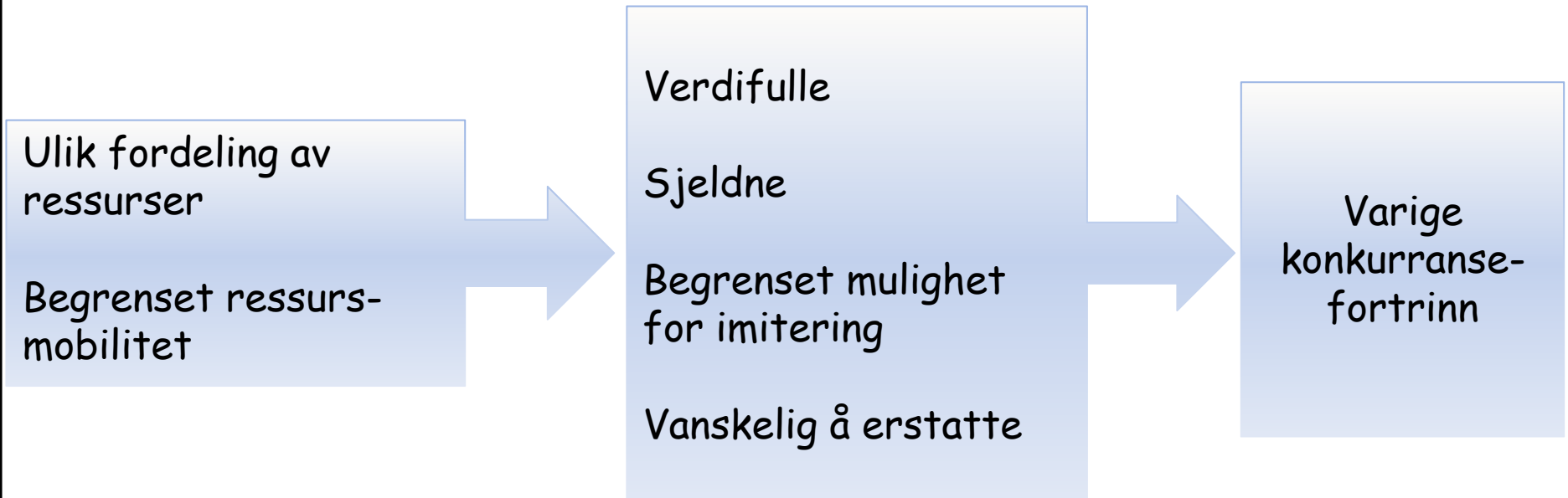
	<i>Iceland</i>		<i>Norway</i>		
<b>Cod</b>	Mean	SD	Mean	SD	<i>Sign.</i>
Trawl	44,7 %	1,7 %	31,4 %	1,3 %	***
Gillnet	11,4 %	2,4 %	28,7 %	1,8 %	***
Hand and Long line	37,5 %	1,2 %	23,1 %	1,2 %	***
Danish seine	5,2 %	0,4 %	16,7 %	0,5 %	***
Other	1,2 %	0,5 %	0,1 %	0,0 %	***
<b>Haddock</b>	Mean	SD	Mean	SD	
Trawl	49,0 %	3,7 %	46,7 %	7,5 %	-
Long line	35,5 %	3,5 %	34,5 %	4,2 %	-
Danish seine	14,0 %	2,5 %	14,7 %	3,5 %	-
Other	1,5 %	0,4 %	4,1 %	1,7 %	***
<b>Saithe</b>	Mean	SD	Mean	SD	
Trawl	83,2 %	4,6 %	51,8 %	4,8 %	***
Purse seine	(< 0,1%)	(< 0,1%)	23,2 %	4,3 %	***
Gillnet	7,8 %	3,4 %	17,0 %	2,9 %	***
Hand and Long line	6,2 %	1,9 %	4,4 %	0,8 %	**
Other	2,8 %	0,9 %	3,6 %	0,7 %	*

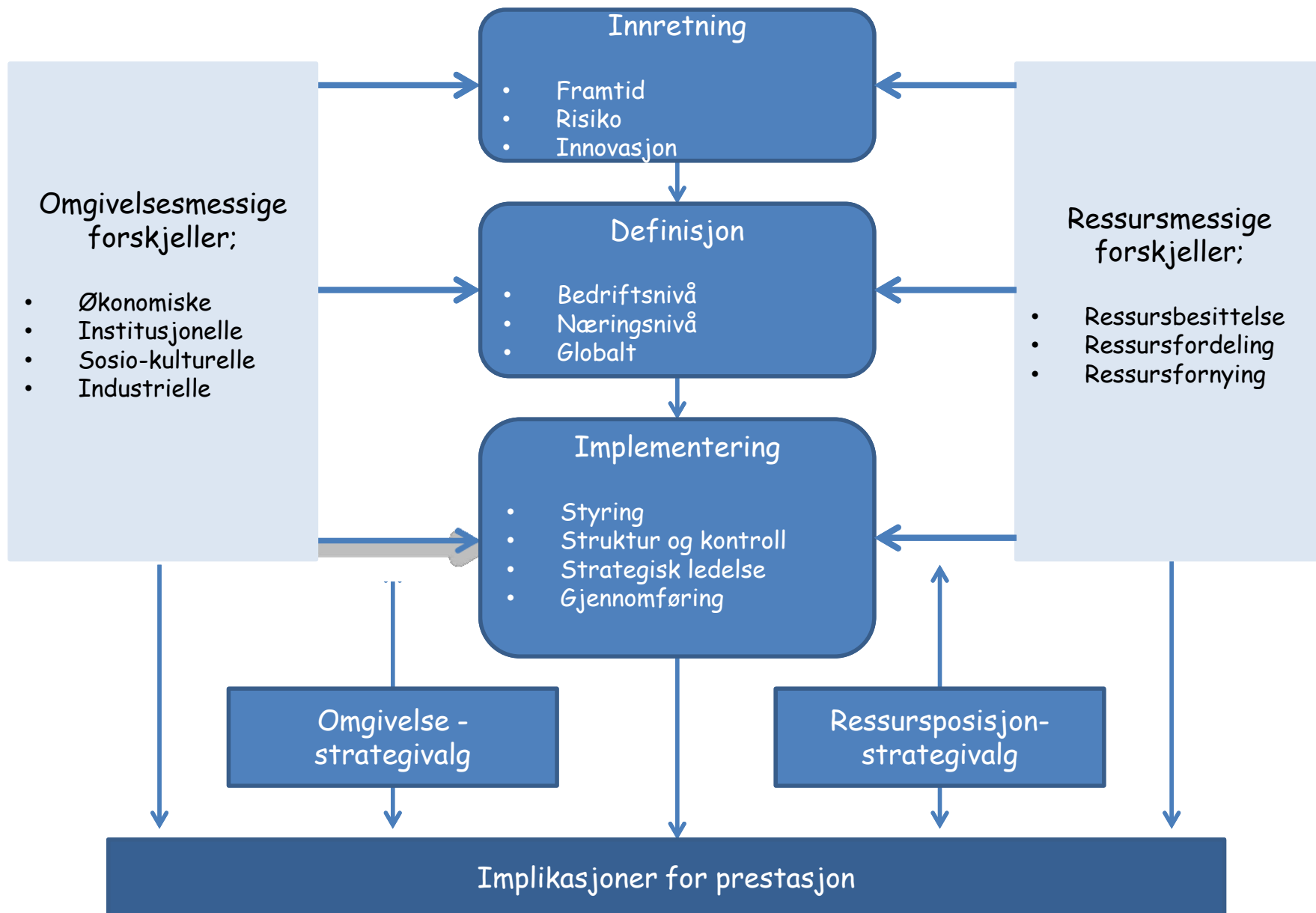
# Nasjonale konkurransefortrinn

- Ressurstilgang Fordel Norge
- Kontinuitet Fordel Island
- Råvarekvalitet Fordel Island
- Markedsverdi Fordel Island

Norge - Island 1-3

# Varige konkurransefortrinn





# Kan Norge kopiere islandske fortrinn?

- Institusjonelle forhold kan endres;
  - Økonomisk organisering
  - Fangstreguleringer
  - Kvotefordeling
  - Redskapsvalg
  - Kvotegrunnlag
- Biologiske og geografiske forhold kan ikke endres;
  - Vandringsmønster
  - Fangstrater
  - Avstander
- Kan ny teknologi, for eksempel fangstbasert havbruk, redusere fortrinnet?