Positioning of Norwegian Seafood
Preliminary Results from International Survey

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Prepared for the presentation at NSC, May 15 2012

Overview of the project

- Analyze the "positioning" of Norwegian seafood
- Obtain insights into consumers' seafood consumption behavior and choices
- Target species
  - Salmon
  - Cod
  - Herring

- Consumer survey in multiple countries
  - Salmon (UK, Russia, Germany, France, Sweden)
  - Cod (UK, France, Germany, Sweden)
  - Herring (Russia, Germany, Poland, Sweden)
  - Target the general population in each country
  - Sample size is approximately 500 per country per species

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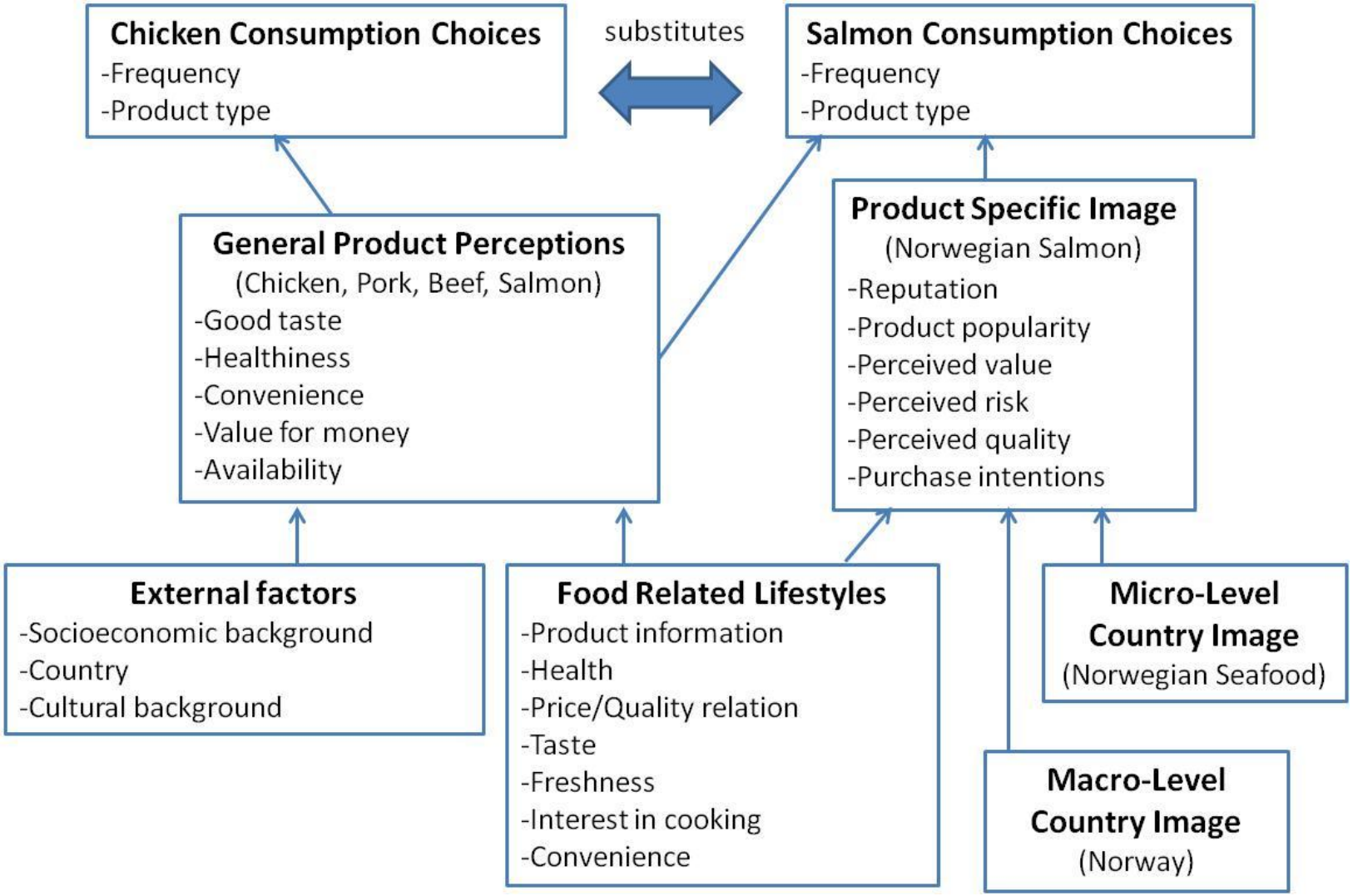
Conceptual Diagram (Salmon)



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Current status

- Salmon survey
  - Completed in all five countries
  - November 2011 to February 2012
- Cod survey
  - UK is completed
  - Currently being translated into respective languages
- Herring survey
  - Currently being translated into respective languages

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Today's presentation

- Results from salmon survey
  - Comparisons of UK, Russian, France, Germany, Sweden
- Food related lifestyle
- General produce perceptions of various meat
  - Taste, Healthiness, Value for money, Convenience, and Availability
  - Chicken, pork, beef, and salmon
- Eating frequencies of chicken and salmon
- Relationship between eating frequencies and FRL and product perceptions
- Country of origin and country image

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Food Related Lifestyles (FRL)

- Instrument developed by Brunsø, Grunert, and Scholderer and other researchers
- Theoretically motivated
- "Lifestyle" function as an intervening factor between abstract cognitive categories (e.g., personal values) and situation specific product perceptions
- Validated over different countries
- Widely used in European and non-European countries over years
- In this survey, we employed 7 dimensions out of 21 (Importance of product information, Health, Price/Quality relation, Taste, Freshness, Interest in cooking, and Convenience)
- Each dimension is measured by three questions

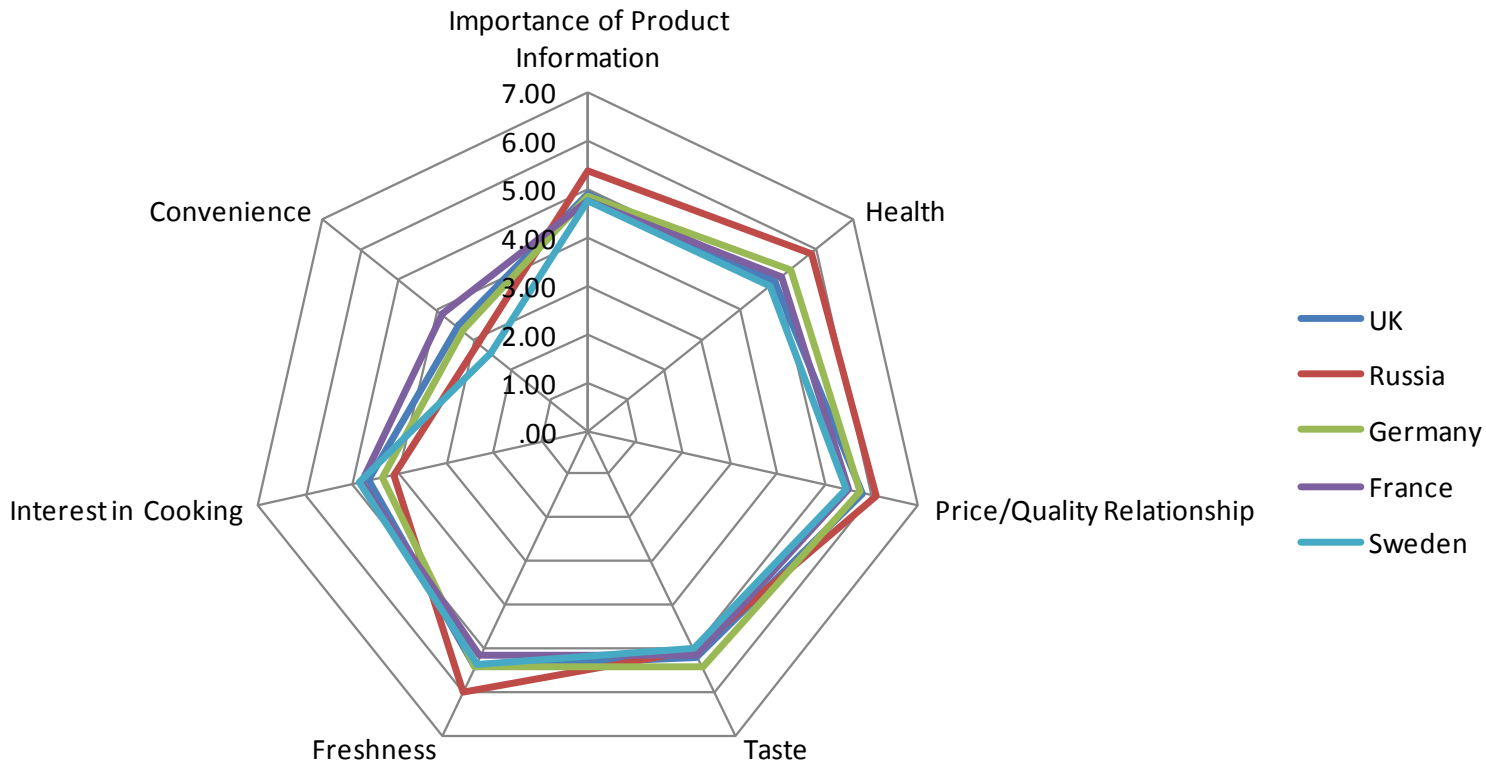
FRL--Correlation

Correlations

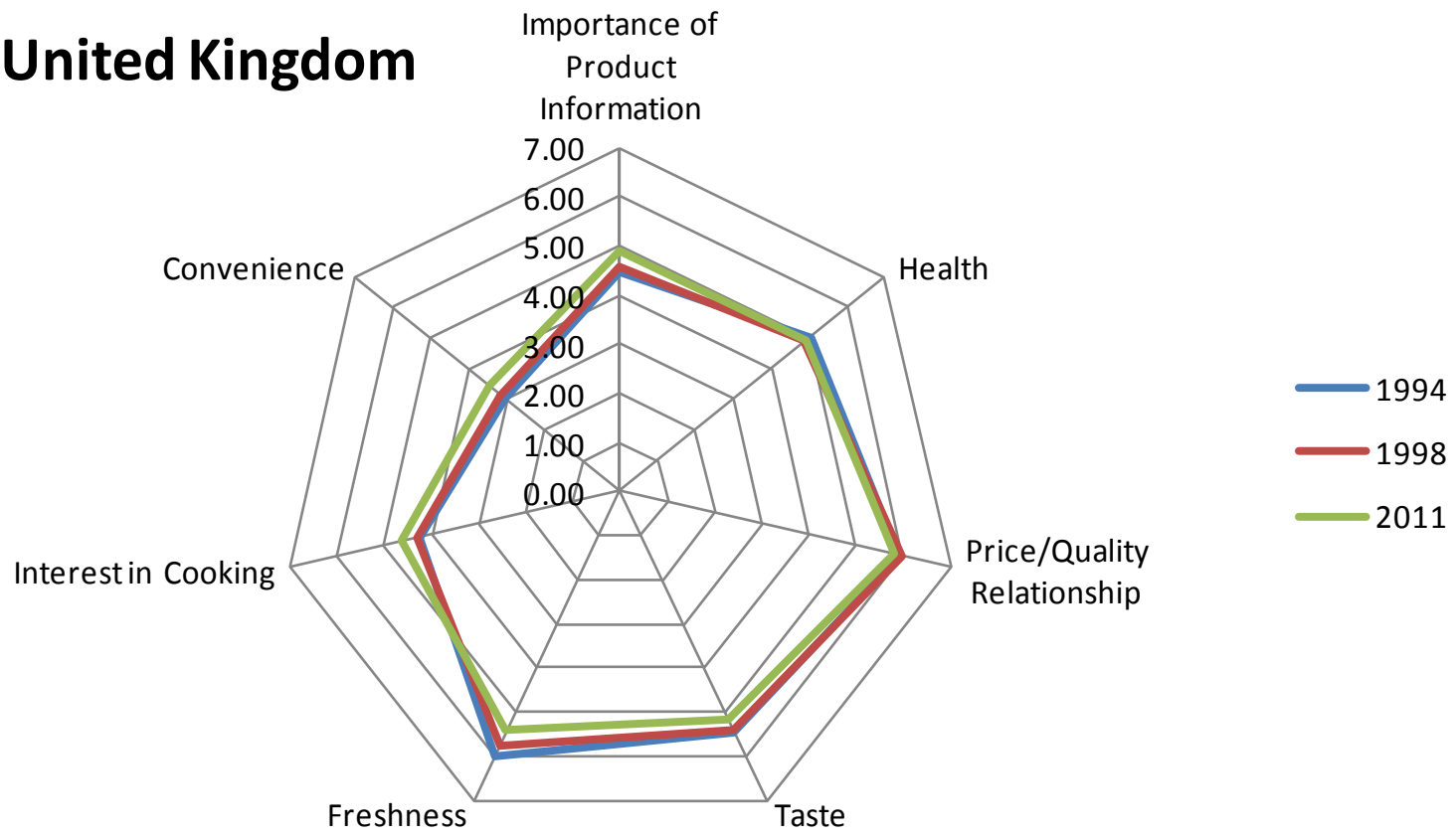
		Importance of Product Information	Health	Price/Quality Relationship	Taste	Freshness	Interest in Cooking	Convenience
Importance of Product Information	Pearson Correlation	1	.640**	.554**	.038	.479**	.076**	.090**
	Sig. (2-tailed)		.000	.000	.055	.000	.000	.000
	N	2640	2572	2576	2593	2589	2552	2588
Health	Pearson Correlation	.640**	1	.562**	.092**	.674**	.110**	-.060**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.003
	N	2572	2608	2568	2572	2572	2549	2571
Price/Quality Relationship	Pearson Correlation	.554**	.562**	1	.340**	.518**	.069**	.020
	Sig. (2-tailed)	.000	.000		.000	.000	.001	.306
	N	2576	2568	2614	2576	2560	2538	2575
Taste	Pearson Correlation	.038	.092**	.340**	1	.199**	.098**	-.018
	Sig. (2-tailed)	.055	.000	.000		.000	.000	.349
	N	2593	2572	2576	2616	2578	2552	2589
Freshness	Pearson Correlation	.479**	.674**	.518**	.199**	1	.236**	-.209**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	2589	2572	2560	2578	2613	2555	2572
Interest in Cooking	Pearson Correlation	.076**	.110**	.069**	.098**	.236**	1	-.340**
	Sig. (2-tailed)	.000	.000	.001	.000	.000		.000
	N	2552	2549	2538	2552	2555	2576	2549
Convenience	Pearson Correlation	.090**	-.060**	.020	-.018	-.209**	-.340**	1
	Sig. (2-tailed)	.000	.003	.306	.349	.000	.000	
	N	2588	2571	2575	2589	2572	2549	2613

**. Correlation is significant at the 0.01 level (2-tailed).

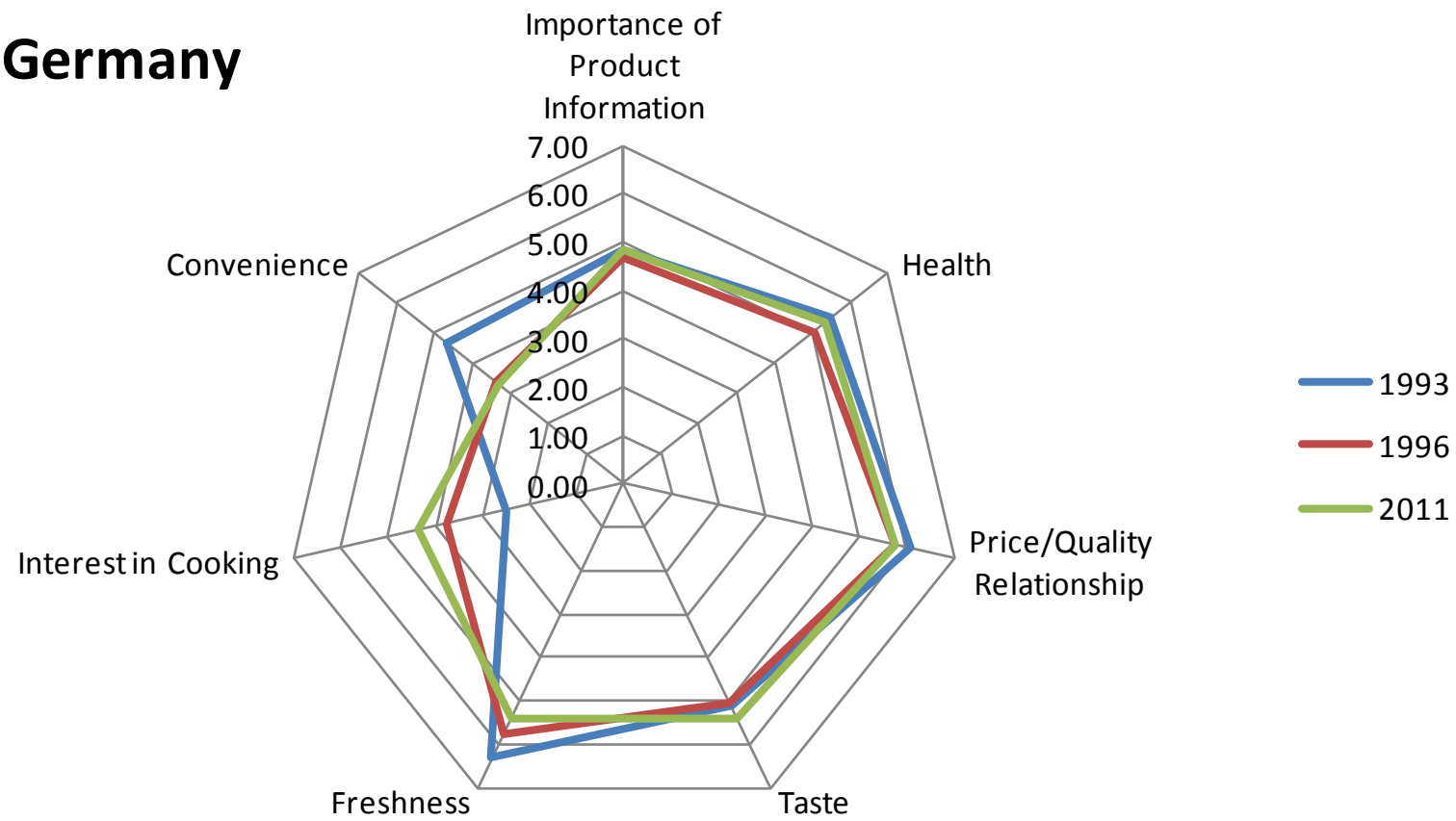
FRL Country Comparisons



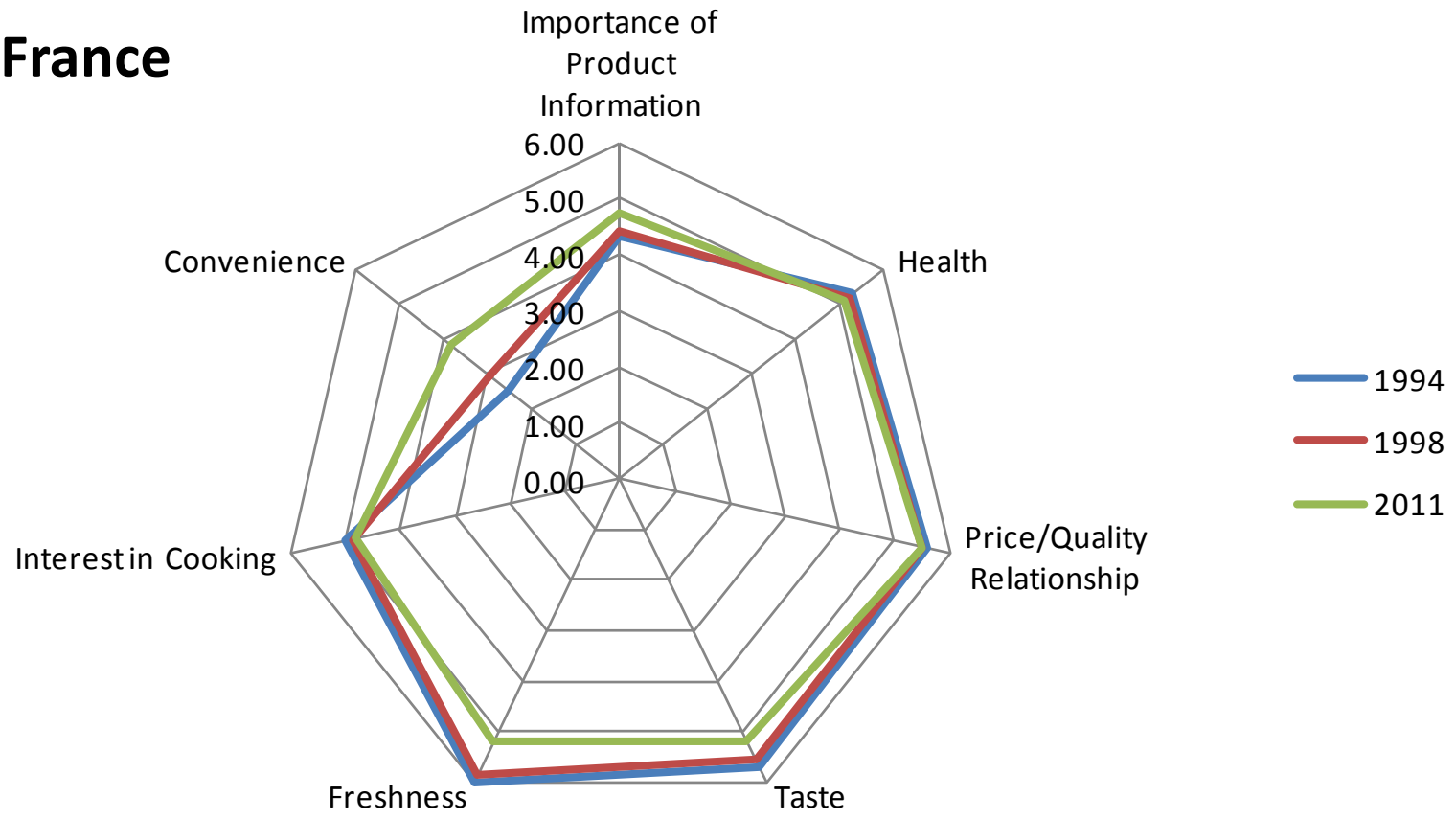
Comparisons over time (UK)



Comparisons over time (Germany)



Comparisons over time (France)



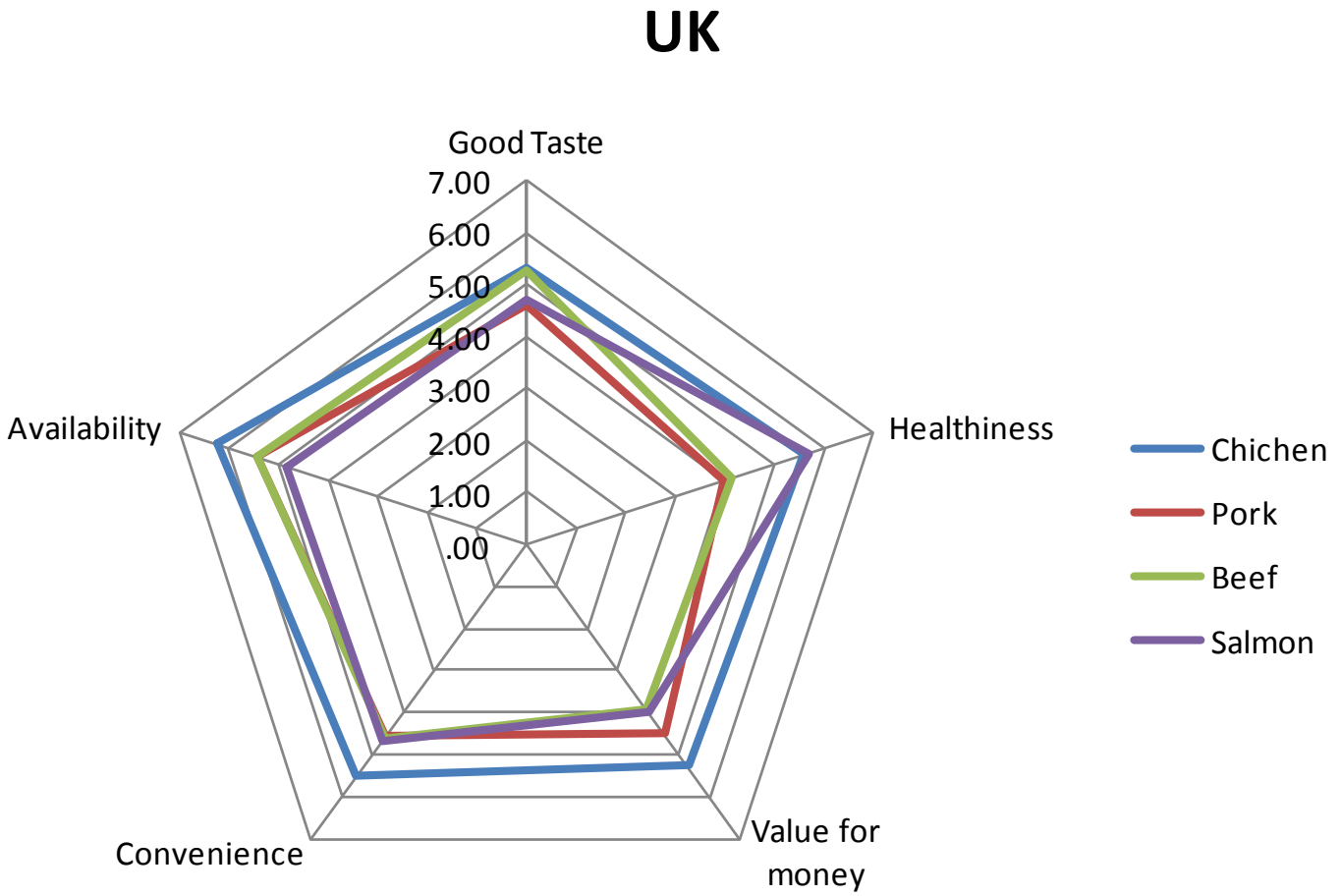
General product perceptions

- How would you rate each of the following meat categories in terms of good taste, healthiness, value for money, convenience, and availability? (scale from 1=extremely poor to 7=superior)

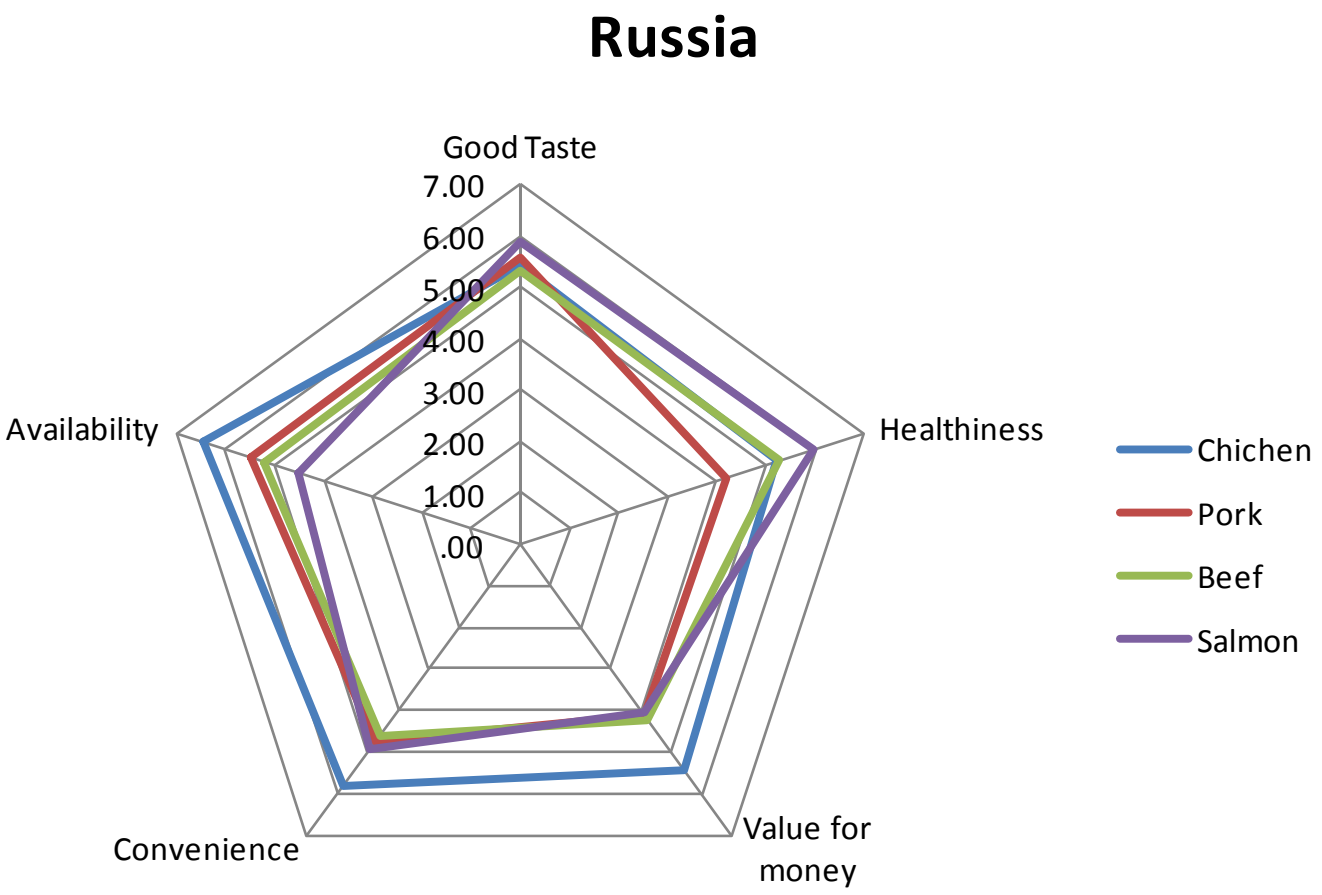
- Asked about Chicken, pork, beef, and salmon

  → How is salmon positioned compared to other meat?

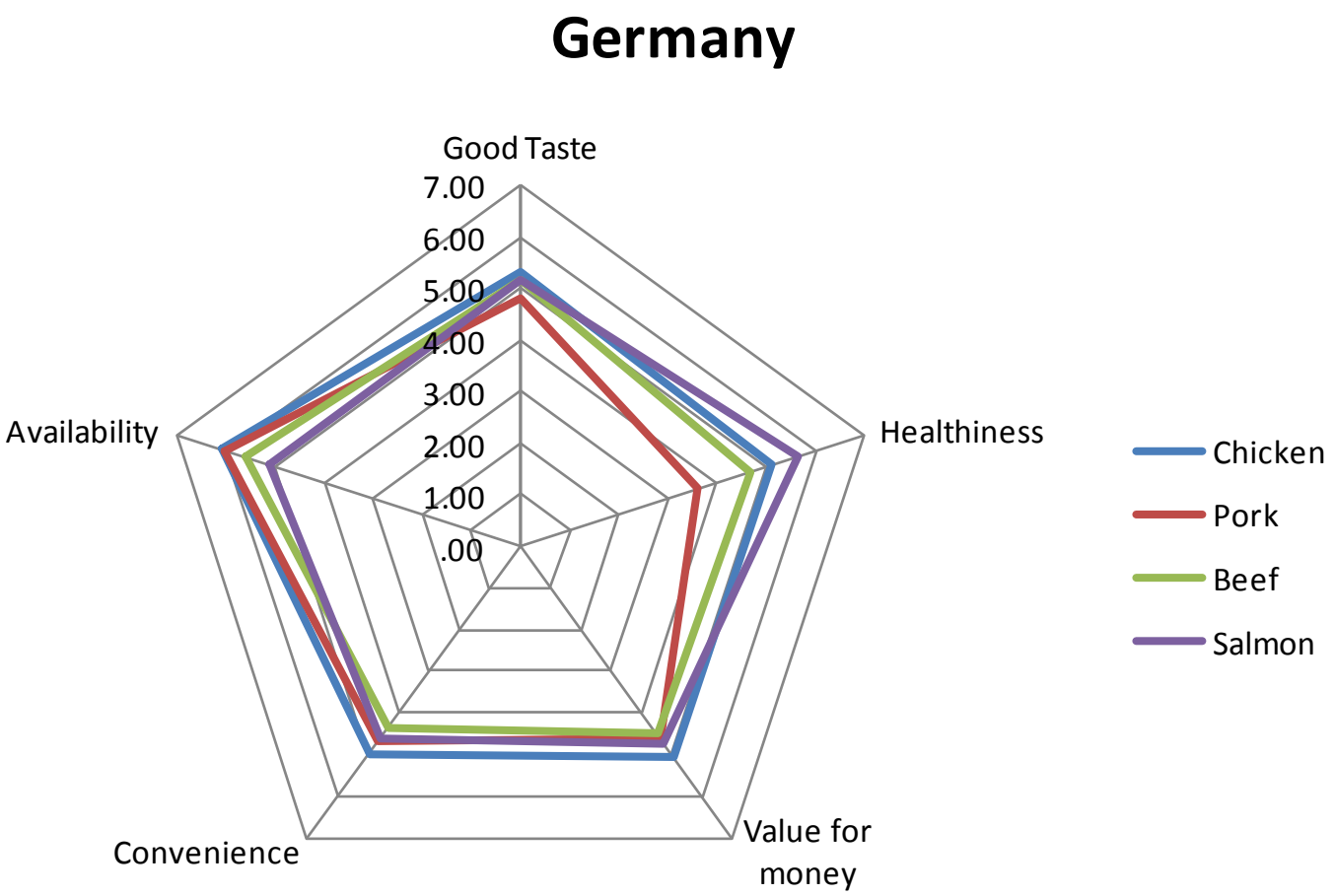
General product perceptions (UK)



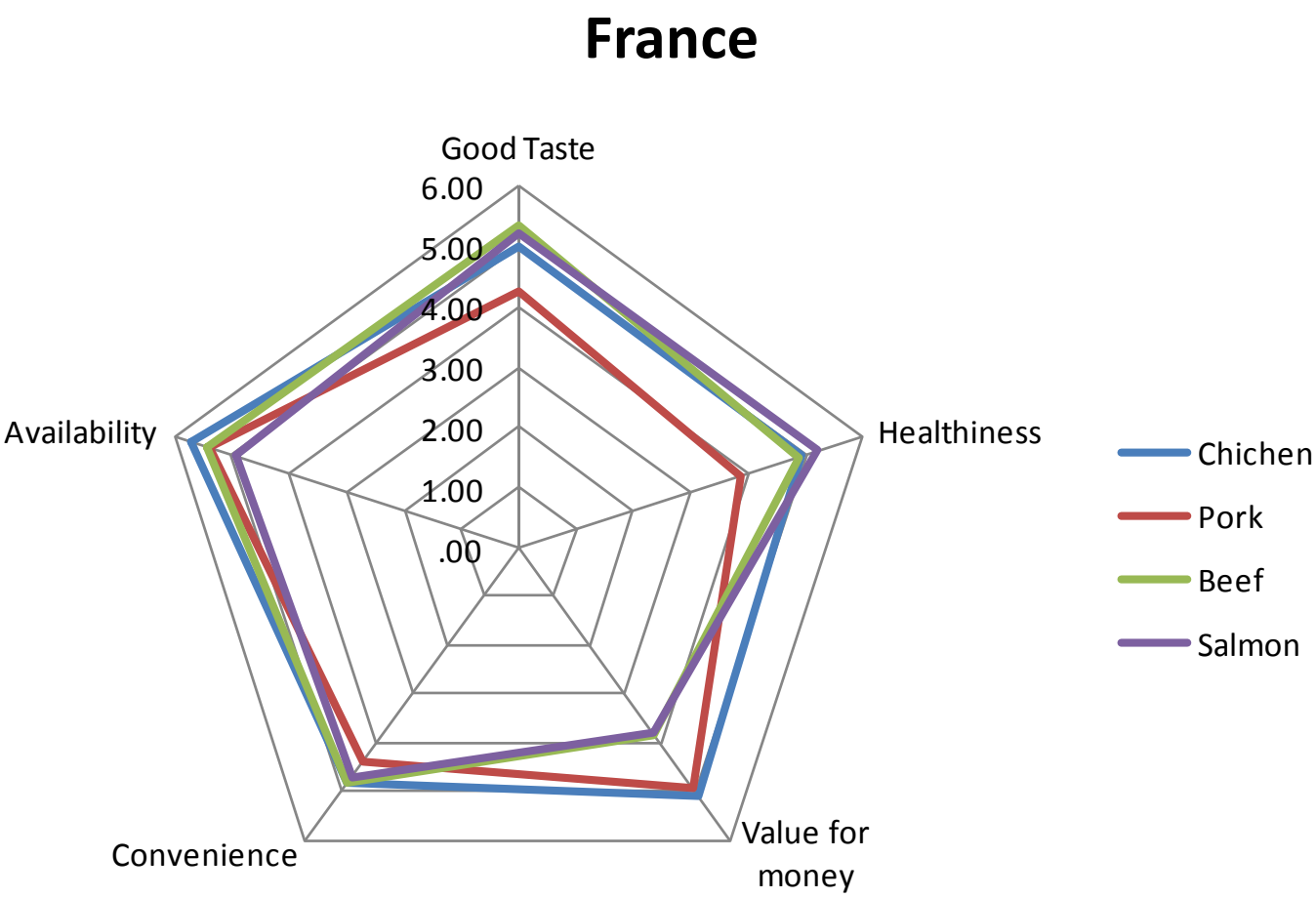
General product perceptions (Russia)



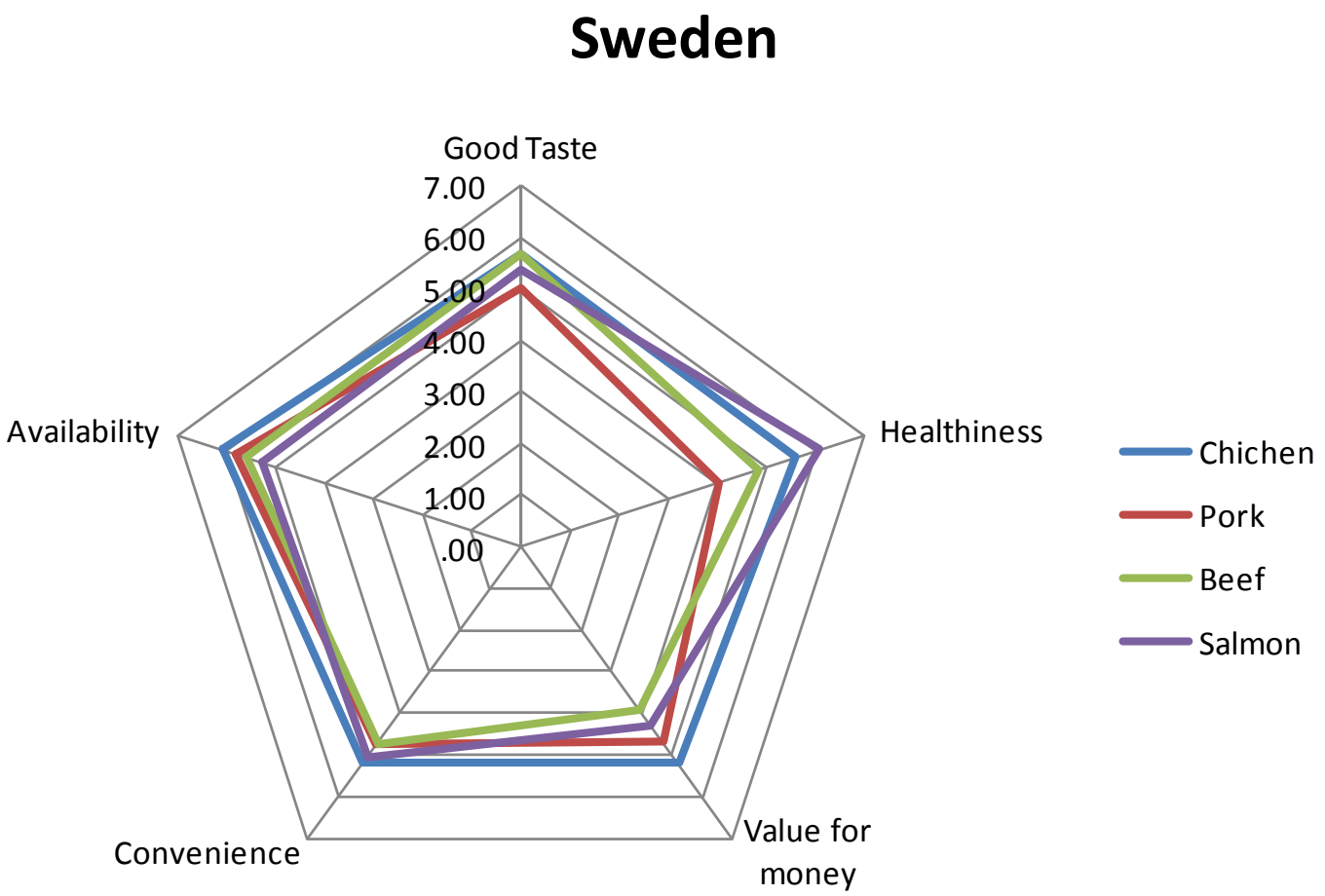
General product perceptions (Germany)



General product perceptions (France)



General product perceptions (Sweden)



General product perceptions of salmon

- Salmon is considered superior in ”healthiness” dimension compared to other meat products in all countries
- ”Taste” is rated high in all countries except for UK
- Low rating regarding ”availability,” ”value for money” and ”convenience”

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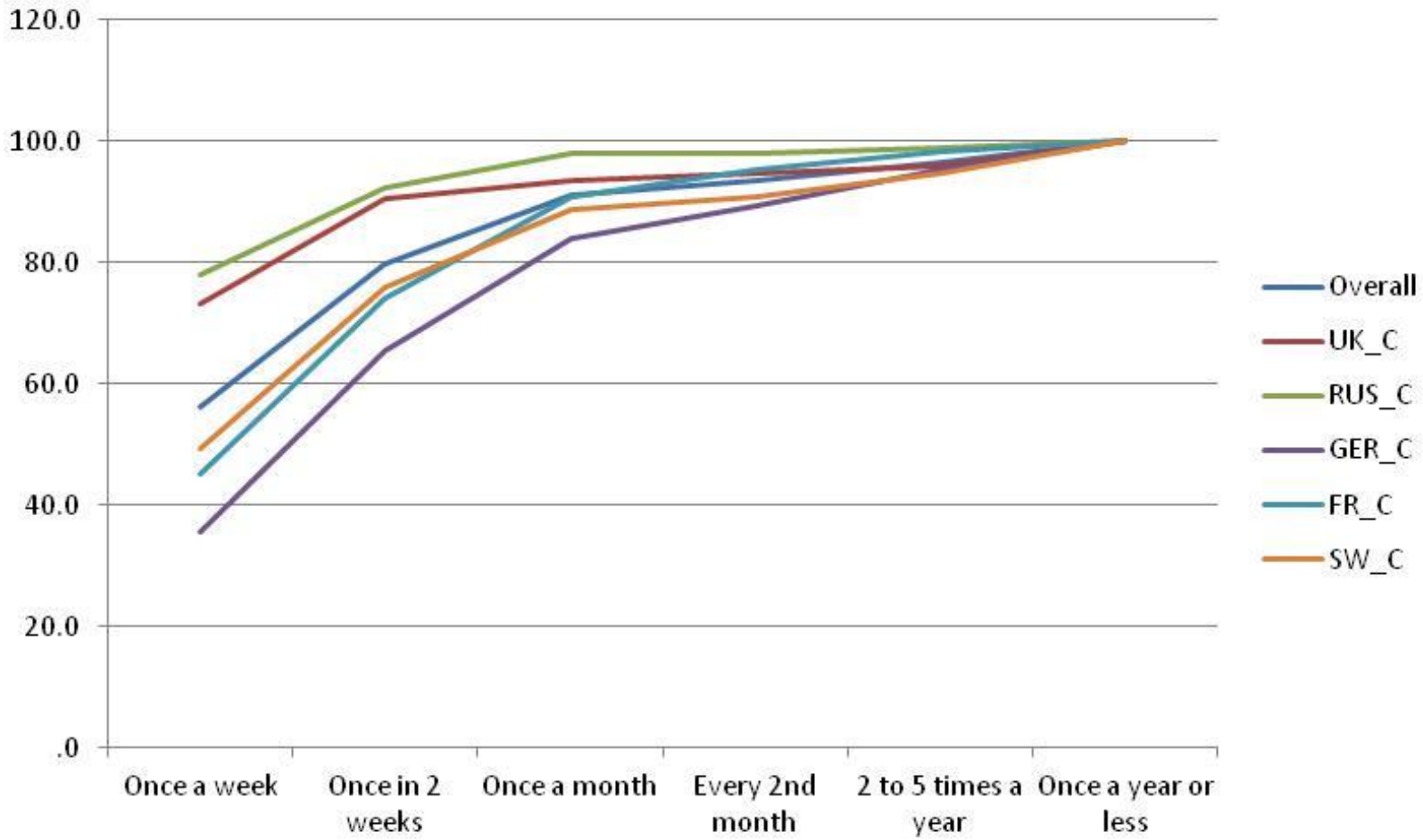
Consumption frequencies (chicken at home)



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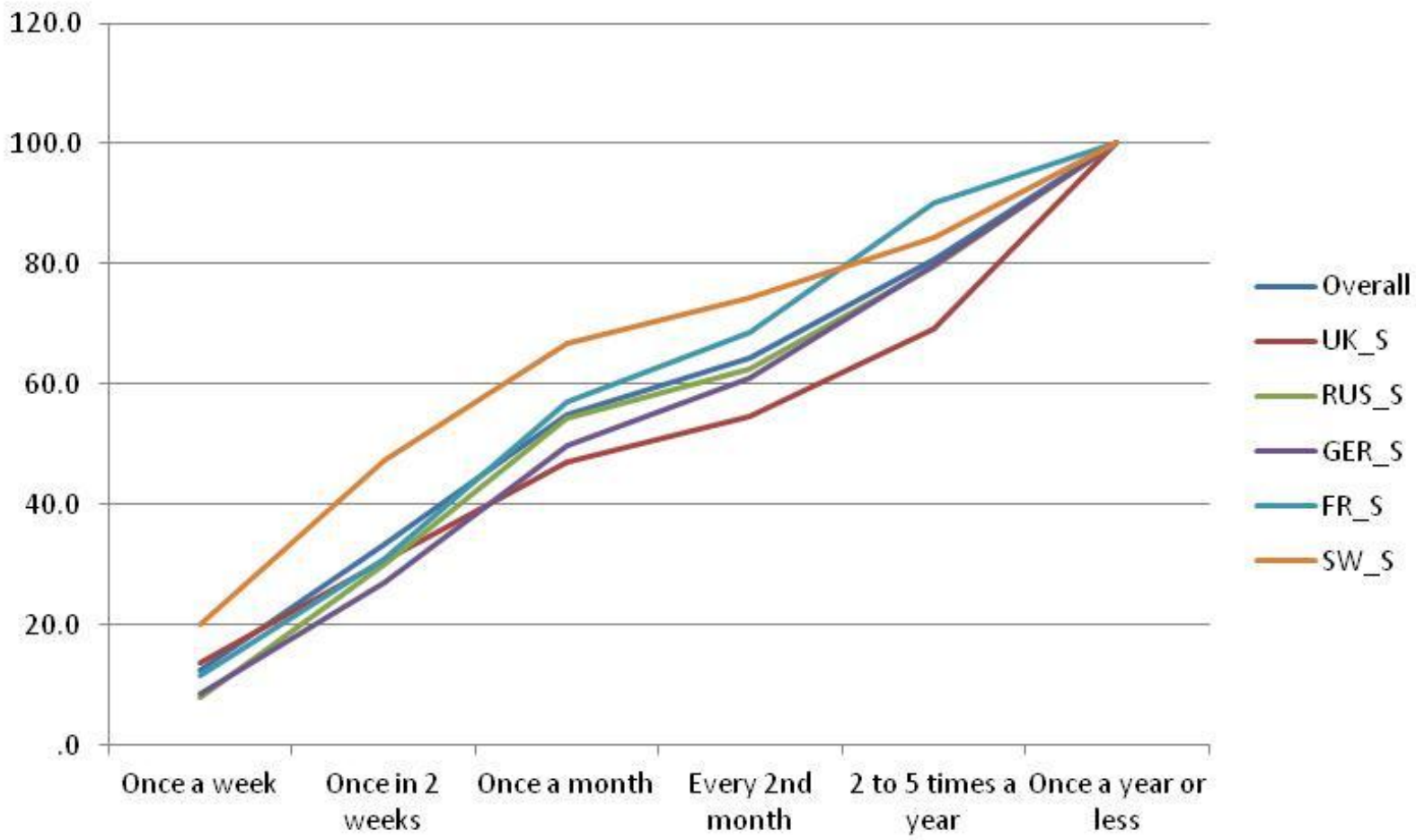
Consumption frequencies (salmon at home)



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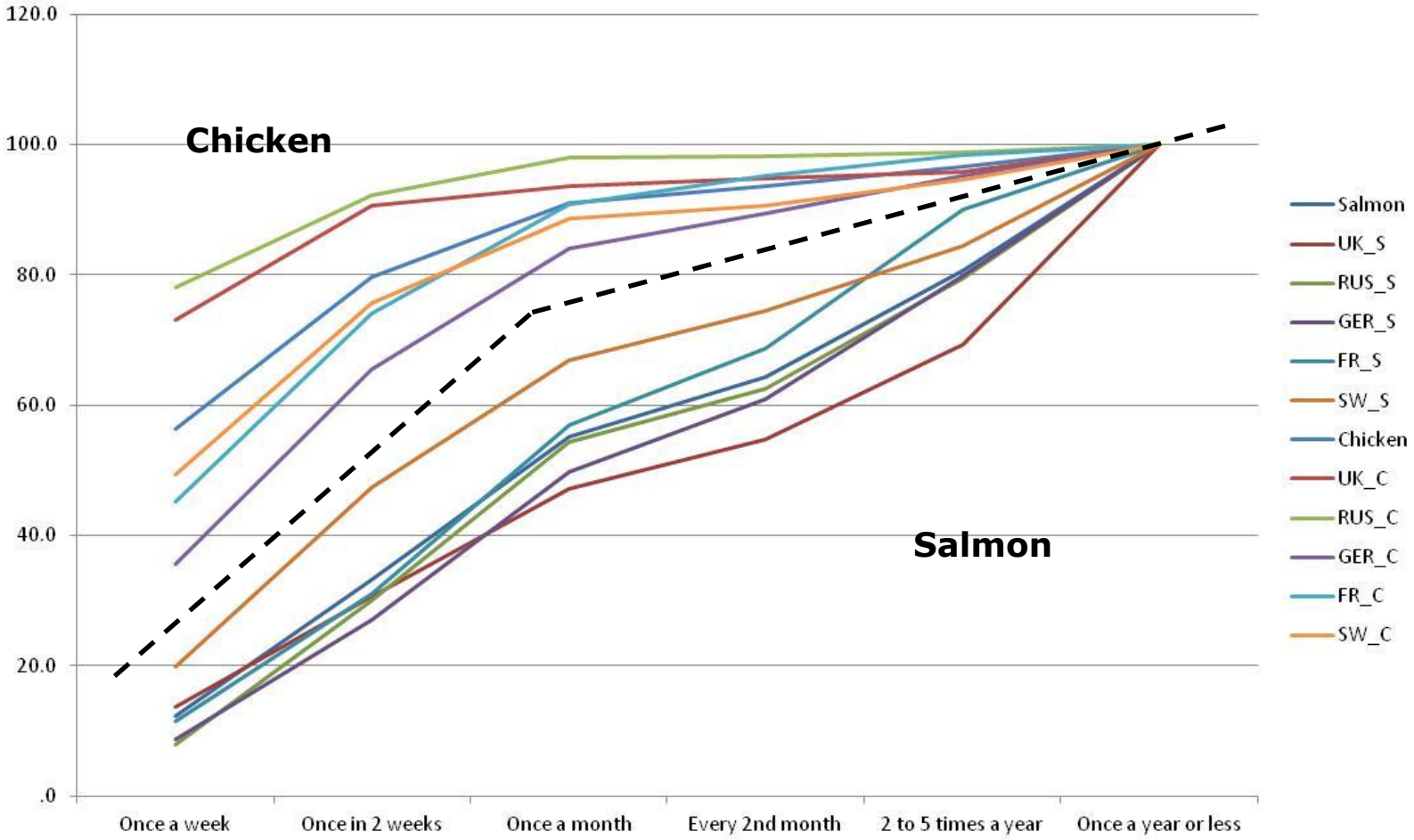
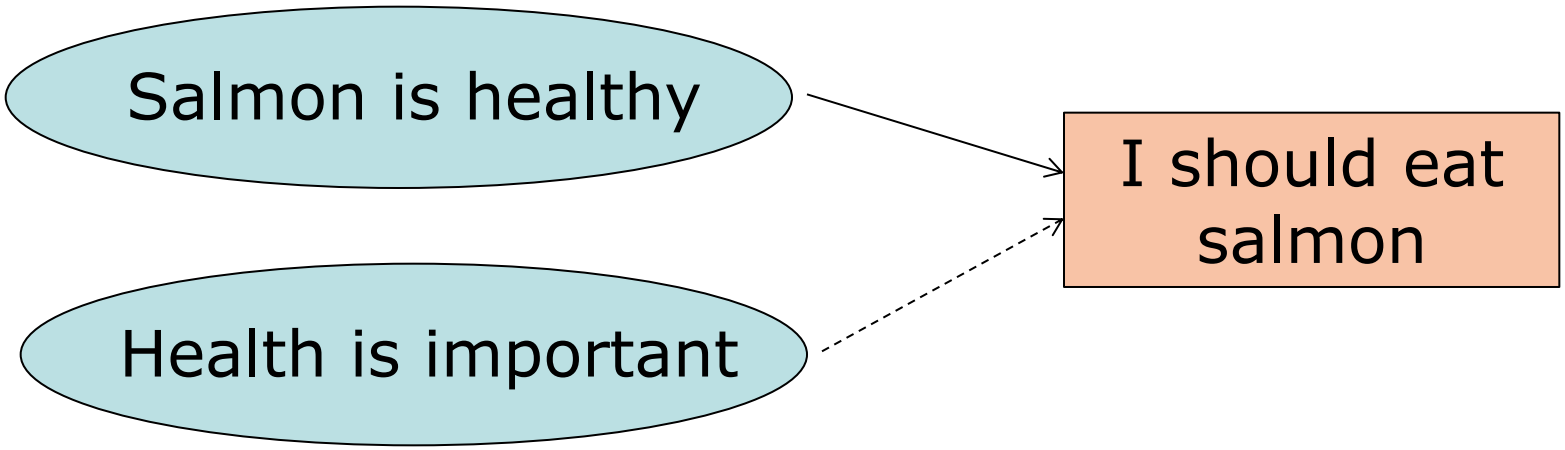
Alltogether



What explains consumption frequencies?

- Food Related Lifestyle?
- Product specific rating?
- Perhaps both (interaction of two)?



Factors

- Both FRL and product specific ratings are highly correlated → Problematic to put into the same regression equation
- These are reduced in dimensions using factor analysis

	FRL	Product Rating
Quality	Product Info, Health, Price/Quality, taste, Freshness	Good taste, Healthiness, Value for money
Convenience	Interest in cooking, Convenience	Convenience, Availability
Taste		Taste

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Exploratory Regression analysis

- Dependent variable: eating frequency of chicken and salmon (categorical)
- Independent variables
  - FRL
  - Product ratings for the respective product
  - Interaction of two
  - Some demographic variables
  - Cross-frequency
- Pooled and country specific regressions
  - Pooled model with country specific fixed effects

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Model Fit

R^2 from the regression

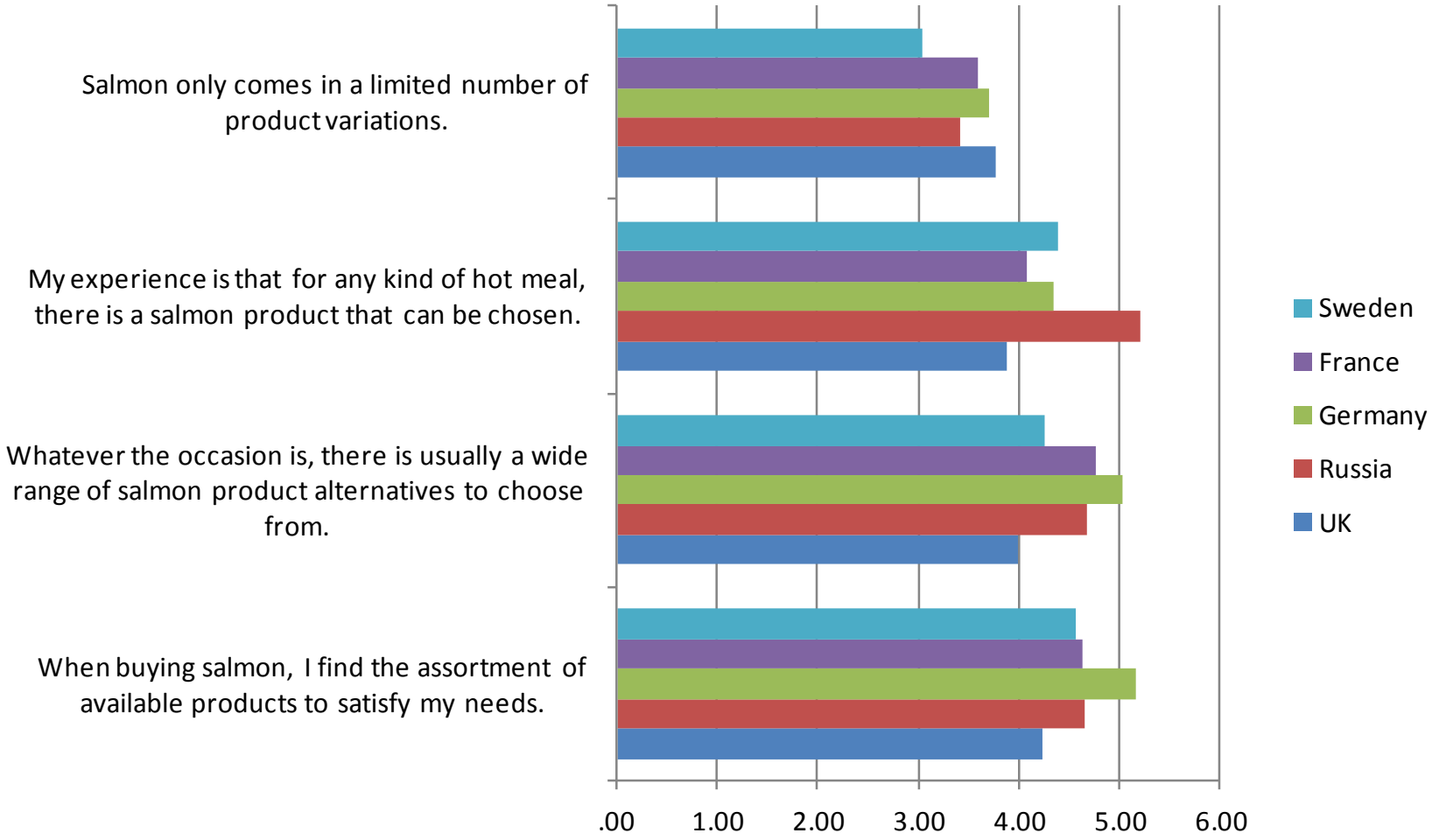
		UK	Russia	Germany	France	Sweden	Overall
Chicken	FRL only	0.01	0.03	0.01	0.02	0.03	0.09
	Product rating only	0.24	0.12	0.16	0.09	0.26	0.23
	+Interaction and socio	0.30	0.16	0.25	0.12	0.30	0.26
	+Cross frequency	0.33	0.17	0.32	0.17	0.35	0.31
Salmon	FRL only	0.09	0.01	0.07	0.02	0.11	0.07
	Product rating only	0.30	0.12	0.18	0.10	0.32	0.22
	+Interaction and socio	0.39	0.19	0.27	0.14	0.40	0.28
	+Cross frequency	0.40	0.20	0.33	0.18	0.44	0.31

Results

	Chicken						Salmon					
	UK	RU	GE	FR	SW	POOL	UK	RU	GE	FR	SW	POOL
Rating quality	+	+	+	+	+	+	+	+	+	+	+	+
Rating convenience	+	+	+	+	+	+	+	+	+	+	+	+
FRL quality	-						+				+	+
FRL convenience									+			(+)
Taste					(-)		-		-	-	-	-
Int quality			+									
Int convenience				(+)			+	+			+	+
Cross frequency	+	+	+	+	+	+	+	(+)	+	+	+	+
Age			-	-	-	-	-	+			+	+
Educ							+				+	+
Female		-				-		(-)	(-)		-	-
Married	+		(+)	(+)	(+)	+	+	+		+		+

- Signs inside the blackets indicates significe only at 10% level.
- Pooled model also included cultural background. Eastern Europe (cheickn, +), Africa and Asia (salmon, +)

Perception about salmon product assortment



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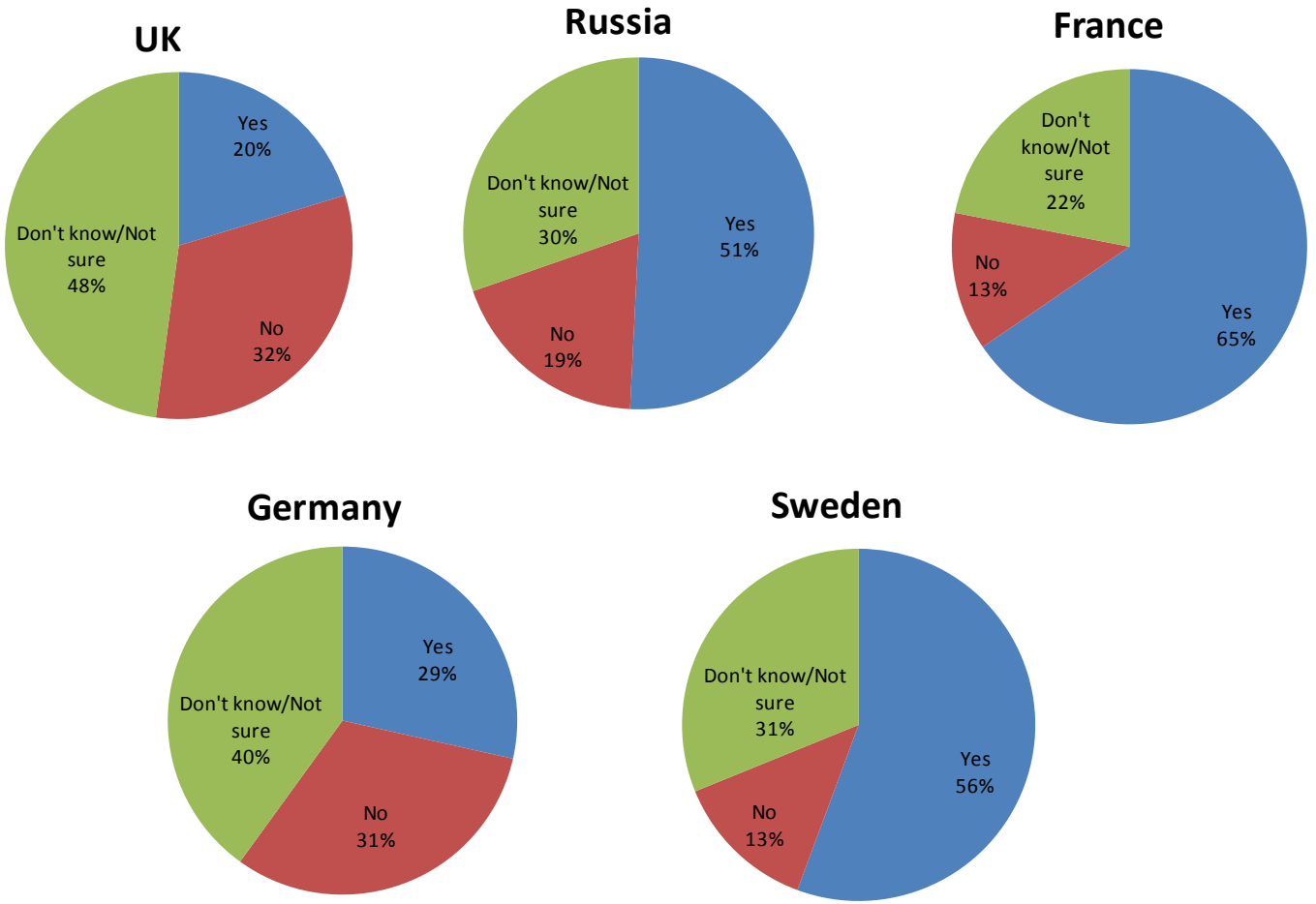
COUNTRY OF ORIGIN

Seafood Country of origin knowledge

Q: Have you bought seafood products from Norway before?



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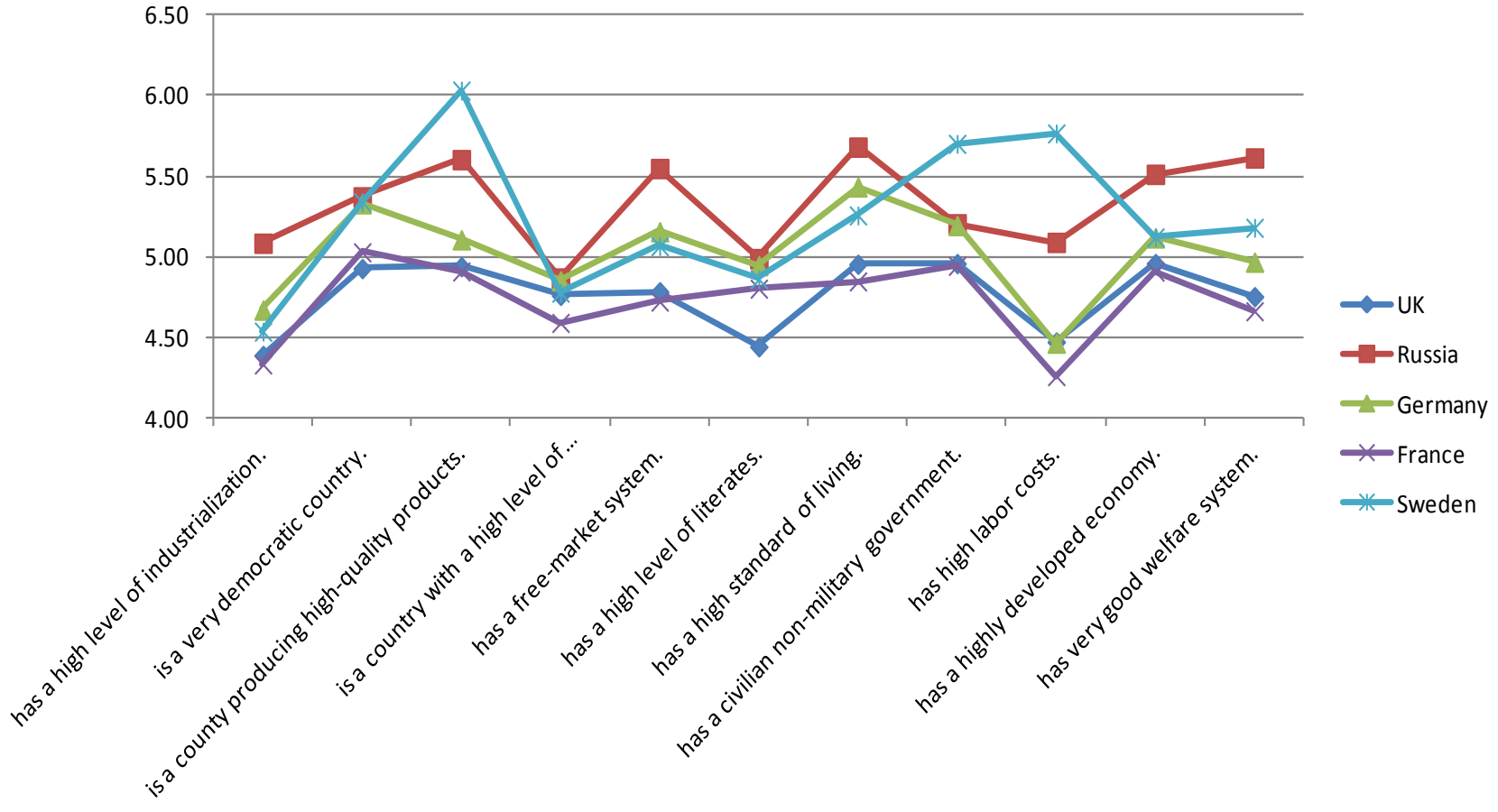
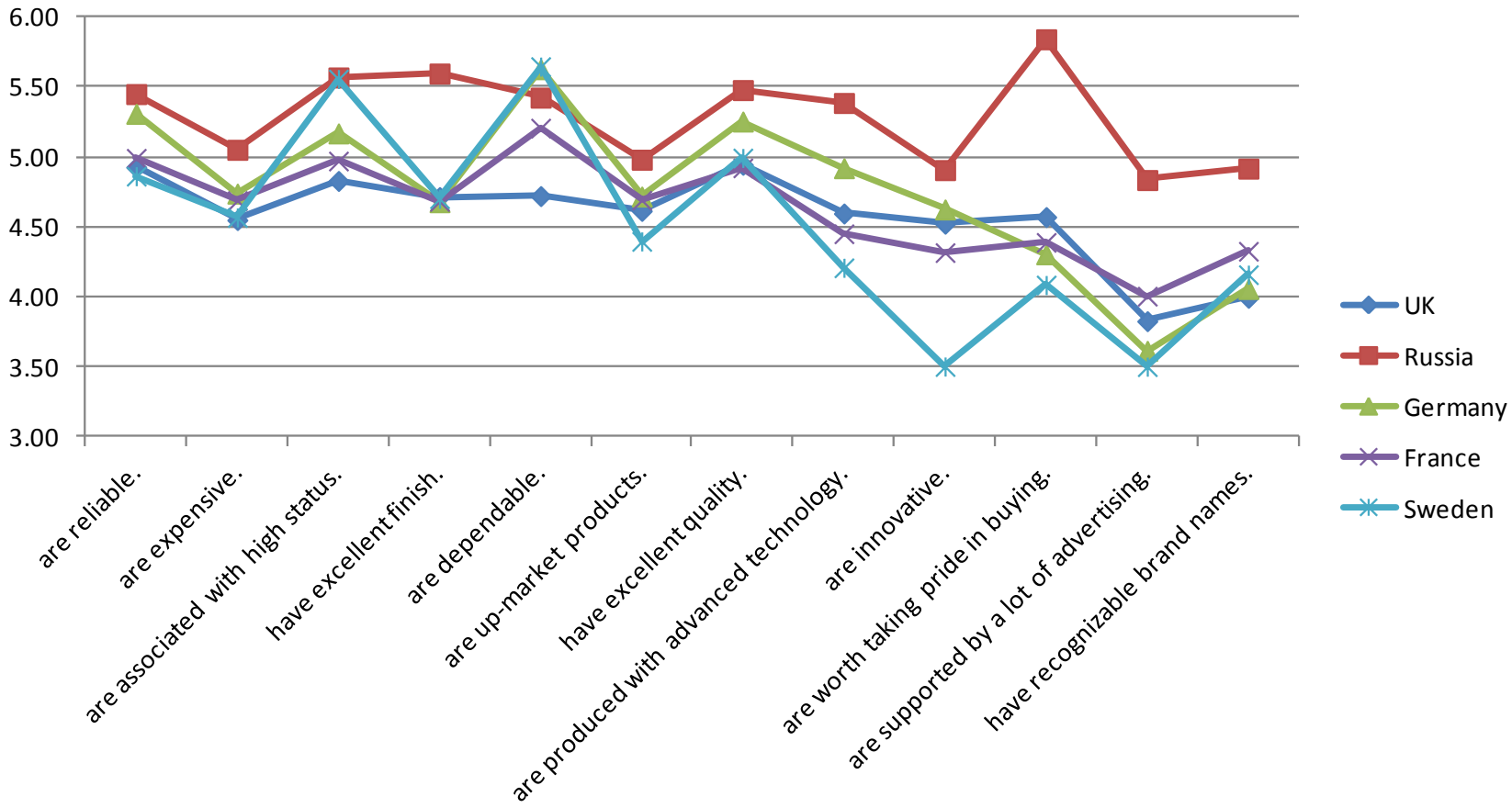
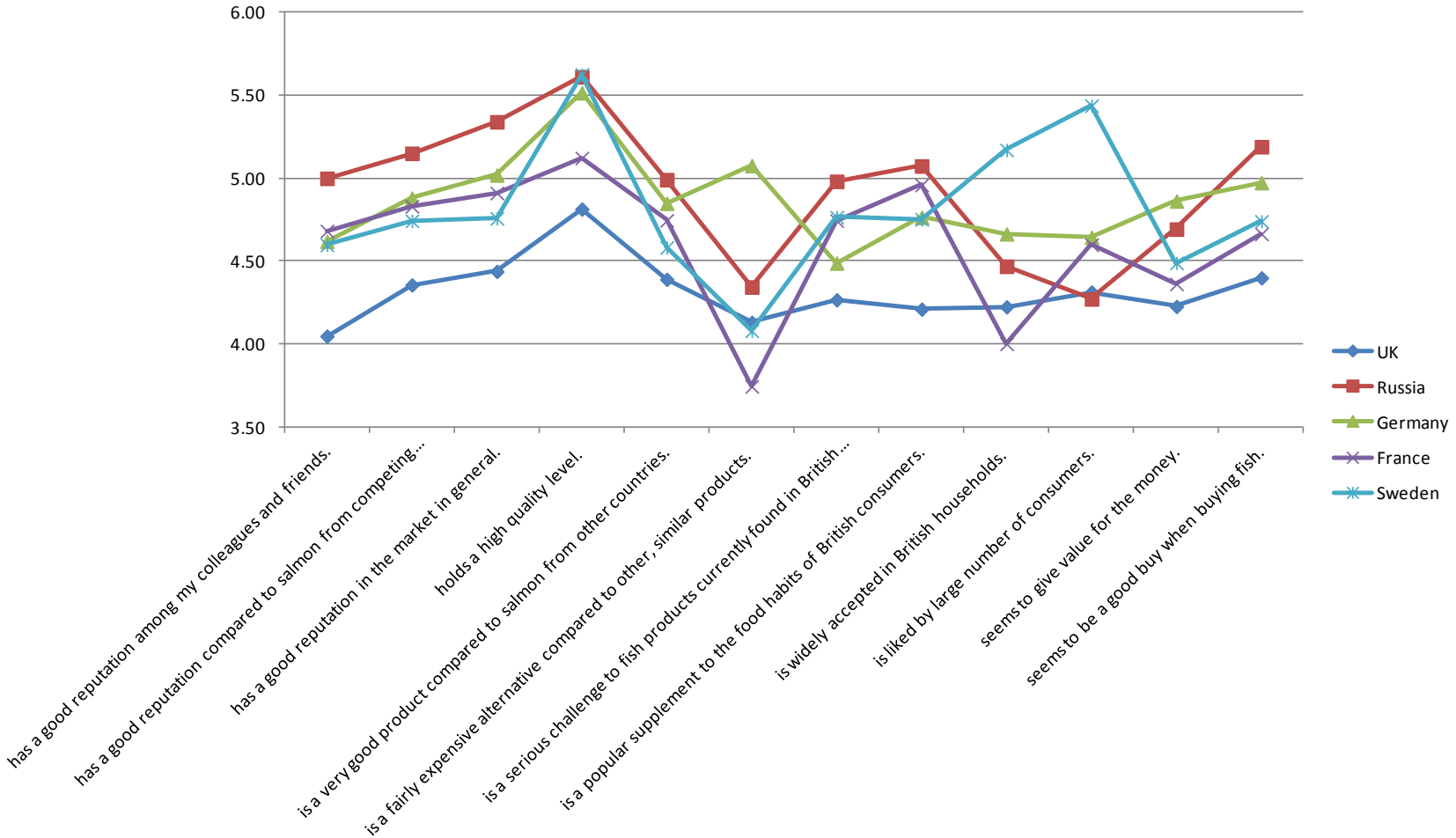
Macro country image



Micro country image (Norwegian seafood products)



Perceptions about Norwegian salmon



Correlations of country image (factor)

Correlations

		Factor score of Macro country image 1	Factor scores of Micro country image 1	Factor scores for product image 1
Factor score of Macro country image 1	Pearson Correlation	1	.653**	.579**
	Sig. (2-tailed)		.000	.000
	N	2402	2255	2270
Factor scores of Micro country image 1	Pearson Correlation	.653**	1	.721**
	Sig. (2-tailed)	.000		.000
	N	2255	2377	2260
Factor scores for product image 1	Pearson Correlation	.579**	.721**	1
	Sig. (2-tailed)	.000	.000	
	N	2270	2260	2414

**. Correlation is significant at the 0.01 level (2-tailed).

Country image and salmon consumption

- Correlation: Eating frequency (behavior)
  - With Macro country image 0.158***
  - With Micro country image 0.151***
  - With product image 0.230***

  Significant correlations but not so strong

- Correlation: Purchase intention
  - With Macro country image 0.382***
  - With Micro country image 0.558***
  - With product image 0.618***

  Significant and strong correlations

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Summary

- Positioning of salmon
  - Strong in “health” dimension in all countries
  - Somewhat weak in “availability,” “convenience,” and “value for money”
  - Mixed result in “taste”
  - Large variation by country
- Eating frequencies
  - Strong link to perceived quality and convenience of salmon
  - Also positively related to chicken consumption
  - Negative with ”Taste” dimension of FRL
- Country of origin
  - Limited knowledge in some countries
  - Positively correlated within and also with eating frequencies

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What's next?

- More fine-tuned country by country analysis
  - FRL
  - Product ratings
  - Country of origin
- Market segmentation using FRL
  - Exploring the relationship with salmon eating behavior
  - Characterization of the segment by observable measures
- More comprehensive modeling of the effect of country of origin
- Comparison with other species (cod and herring)
- Input from you are very welcome!

Thank you!