

# Extending Supply Side Statistics for the Tourism Sector

**A new approach based on  
linked administrative data**

[steve.macfeely@unctad.org](mailto:steve.macfeely@unctad.org)



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The story begins with...**Eyjafjallajökull (2010)**



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## Overview

1. Purpose
2. Concepts & Definitions
3. Linking Administrative Data
4. Selected Results (*from Ireland*)
5. Conclusion & Discussion

## Primary aim

- Develop Supply Side tourism statistics
- Provide robust regional tourism indicators
- Performance indicators for tourism sector
- Reduce 'isolation' of tourism

## Secondary aim

- Reduce costs
- Reduce Burden
- Increase information
- Exploit Administrative data
- Add value to existing datasets

# What are (Characteristic) Tourism Industries?

## CSO Tourism Industries

	NACE Rev.2		NACE Rev.2
<b>1 Accommodation services for visitors</b>		<b>7 Transport equipment rental services</b>	
Hotels and similar accommodation	55.10	Renting and leasing of cars and light vehicles	77.11
Holiday and other collective accommodation	55.20		
Recreational vehicle parks, trailer parks and camping grounds	55.30	<b>8 Travel agencies and other reservation services</b>	
Other accommodation	55.90	Travel agency activities	79.11
		Tour operator activities	79.12
<b>2 Food and beverage serving services</b>		Other reservation service and related activity	79.90
Restaurants and mobile food service activities	56.10		
Event catering activities	56.21	<b>9 Cultural services</b>	
Other food services	56.29	Performing arts	90.01
Beverage serving activities	56.30	support activities to performing arts	90.02
		Artistic creation	90.03
<b>3 &amp; 4 Railway &amp; Road passenger transport services</b>		Operation of arts facilities	90.04
Passenger rail transport, interurban	49.10	Library and archives activities	91.01
Urban and suburban passenger land transport	49.31	Museums activities	91.02
		Operation of historic sites and buildings and similar visitor attractions	91.03
Taxi operation	49.32	Botanical and zoological gardens and nature reserves activities	91.04
Other passenger land transport n.e.c.	49.39		
		<b>10 Sports and recreational services*</b>	
<b>5 Water passenger transport services</b>		Operation of sports facilities	93.11
Sea and Coastal passenger water transport	50.10	Fitness facilities	93.13
Inland passenger water transport	50.30	Other sports activities	93.19
		Activities of amusement parks and theme parks	93.21
<b>6 Air passenger transport services</b>		Other amusement and recreation activities	93.29
Passenger Air Transport	51.10	Renting and leasing of personal and household goods	77.21

\* Activities of sports clubs (93.12) excluded

## Primary data sources

- **Business Demography statistics**
- **Business Register**
- Structural Business Statistics
- Labour Force Survey

## What are Administrative Data?

*‘Information which is collected as a matter of routine in the day-to-day management or supervision of a scheme or service or revenue collecting system’*



## What is Business Demography?

Business demography statistics provide data on the active population of enterprises in the State, including enterprise births (entries) and deaths (exits or failures) along with information on growth and survival (life expectancy) rates.

They can also be used to generate indicators of entrepreneurial activity and the factors that enhance or impede it and to understand the contribution of newly-born enterprises to the creation of jobs.

## Conceptual scope

Total Activity in Tourism Characteristic Industries (TCIs)

v

Activity Generated by Tourism Demand

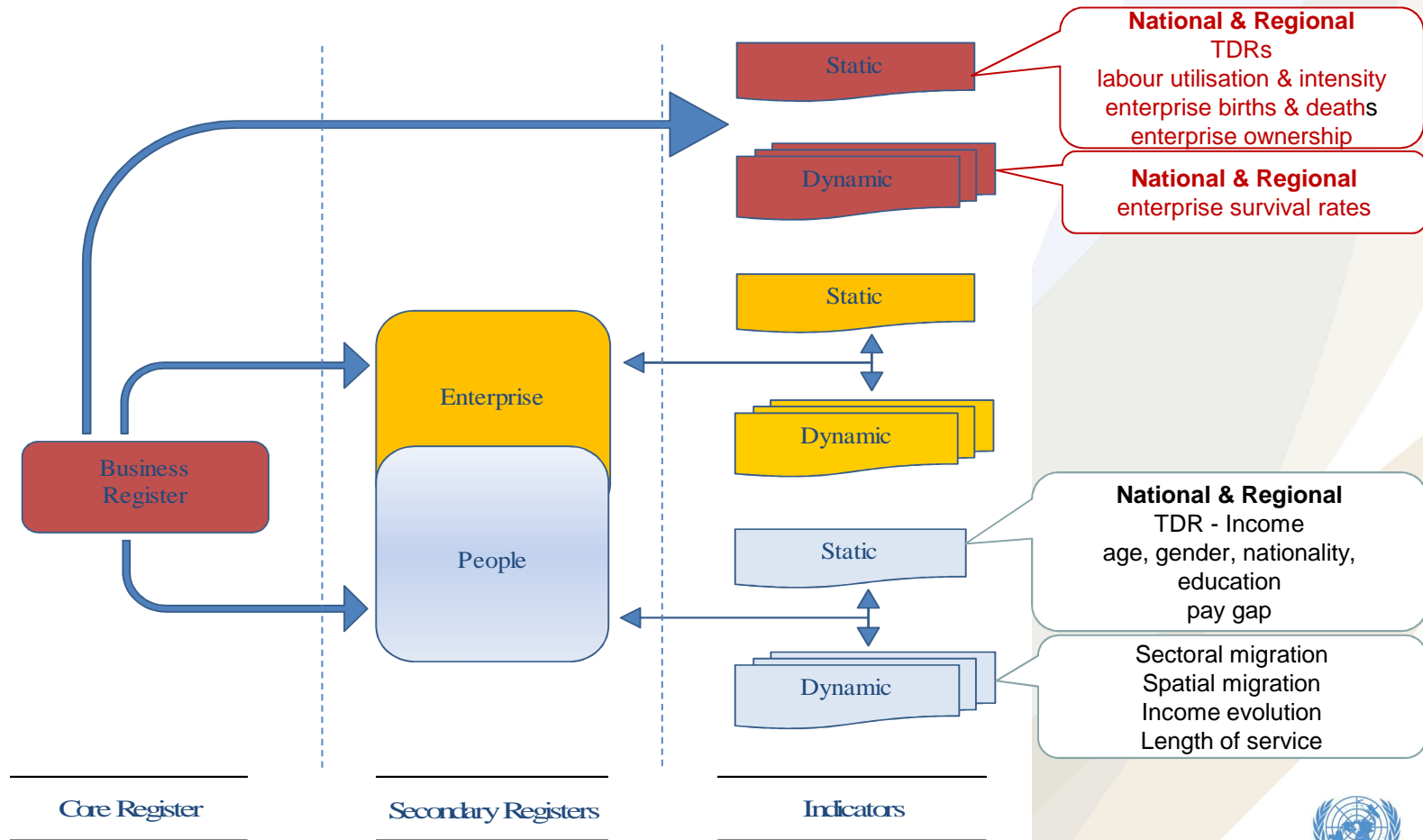
## New Concept – Tourism Dependency Ratios

$$TDR_N = \left( \frac{V^{TI}}{V^{TE}} \right)_N$$

Where:

- *TI* are aggregate of the Tourism Industries for a particular region *N*;
- *TE* is the Total Economy for region *N*;
- *V* is the variable being compared (Enterprises, Employment, Turnover...);
- *N* are the NUTS regions (NUTS 1, 2, 3 or 4).

# Linking registers to administrative data



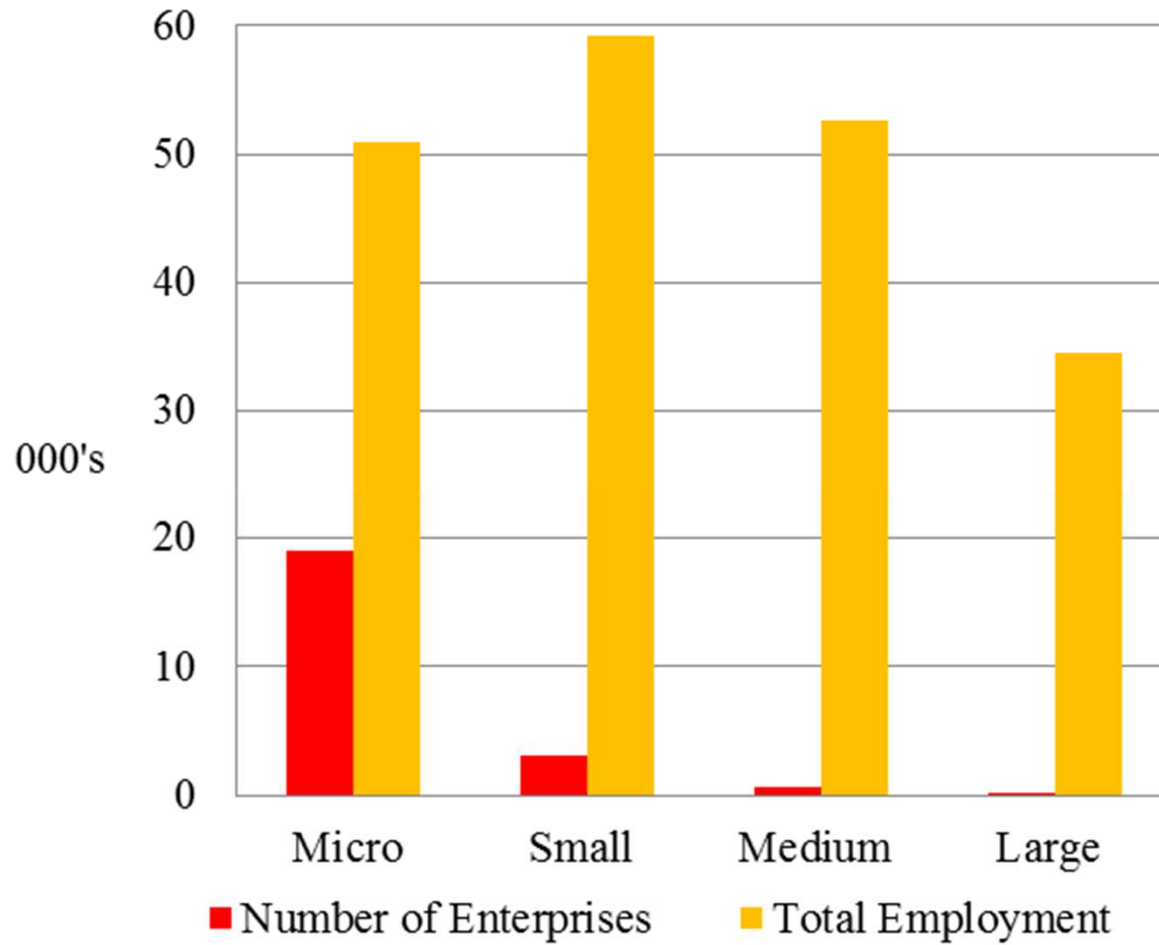
## Sector Profile

NACE Rev. 2 Section	Number of Enterprises	Total Employment	Total Turnover <sup>1</sup>	Total GVA <sup>1</sup>
	<i>000's</i>	<i>000's</i>	<i>€ Billion</i>	<i>€ Billion</i>
Transportation and Storage (H)	1.9	27.1	7.6	2.6
Accommodation and Food Services (I)	16.3	146.0	7.9	3.0
Administrative and Support Services (N)	0.8	5.9	1.8	0.3
Arts, Entertainment & Recreation (R)	3.6	18.3	1.6	0.8
All Tourism Industries	22.7	197.3	18.8	6.7

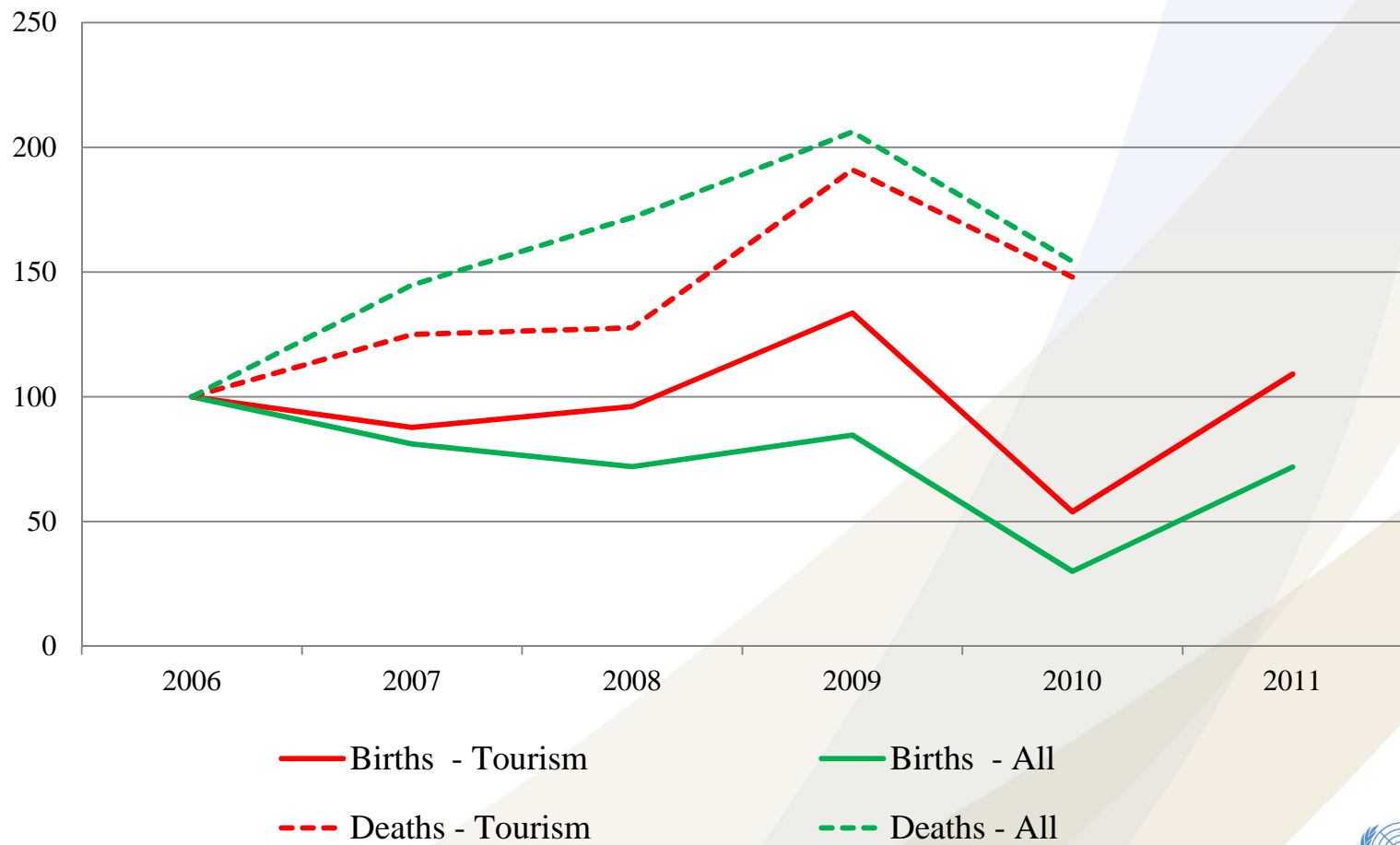
<sup>1</sup> Creative, Arts and Entertainment (NACE Rev.2 - 90) or Libraries, Archives, Museums and other Cultural Activities (NACE Rev.2 - 91) were imputed

Source: Business Register & Annual Services Inquiry

## Size Class



## Enterprise Births & Deaths (index: 2006 = 100)



## Enterprise Survival Rates

Year of Birth	Number of Surviving Enterprises					Survival Rates					
	1	2	3	4	5	1	2	3	4	5	
	Year	Years	Years	Years	Years	Year	Year	Year	Year	Year	
	<i>Units</i>	<i>Units</i>	<i>Units</i>	<i>Units</i>	<i>Units</i>	<i>Units</i>	%	%	%	%	%
<b>Tourism Industries</b>											
2006	1,613	1,407	1,274	1,168	913	850	87	79	72	57	53
2007	1,415	1,196	1,064	838	743		85	75	59	53	
2008	1,550	1,322	992	885			85	64	57		
2009	2,153	1,618	1,458				75	68			
2010	1,680	1,406					84				
<b>Non-Tourism Industries</b>											
2006	15,083	13,586	12,250	10,984	9,180	7,746	90	81	73	61	51
2007	12,046	10,383	9,122	7,691	6,381		86	76	64	53	
2008	10,404	8,930	8,141	6,410			86	78	62		
2009	11,657	9,718	8,341				83	72			
2010	9,557	7,981					84				

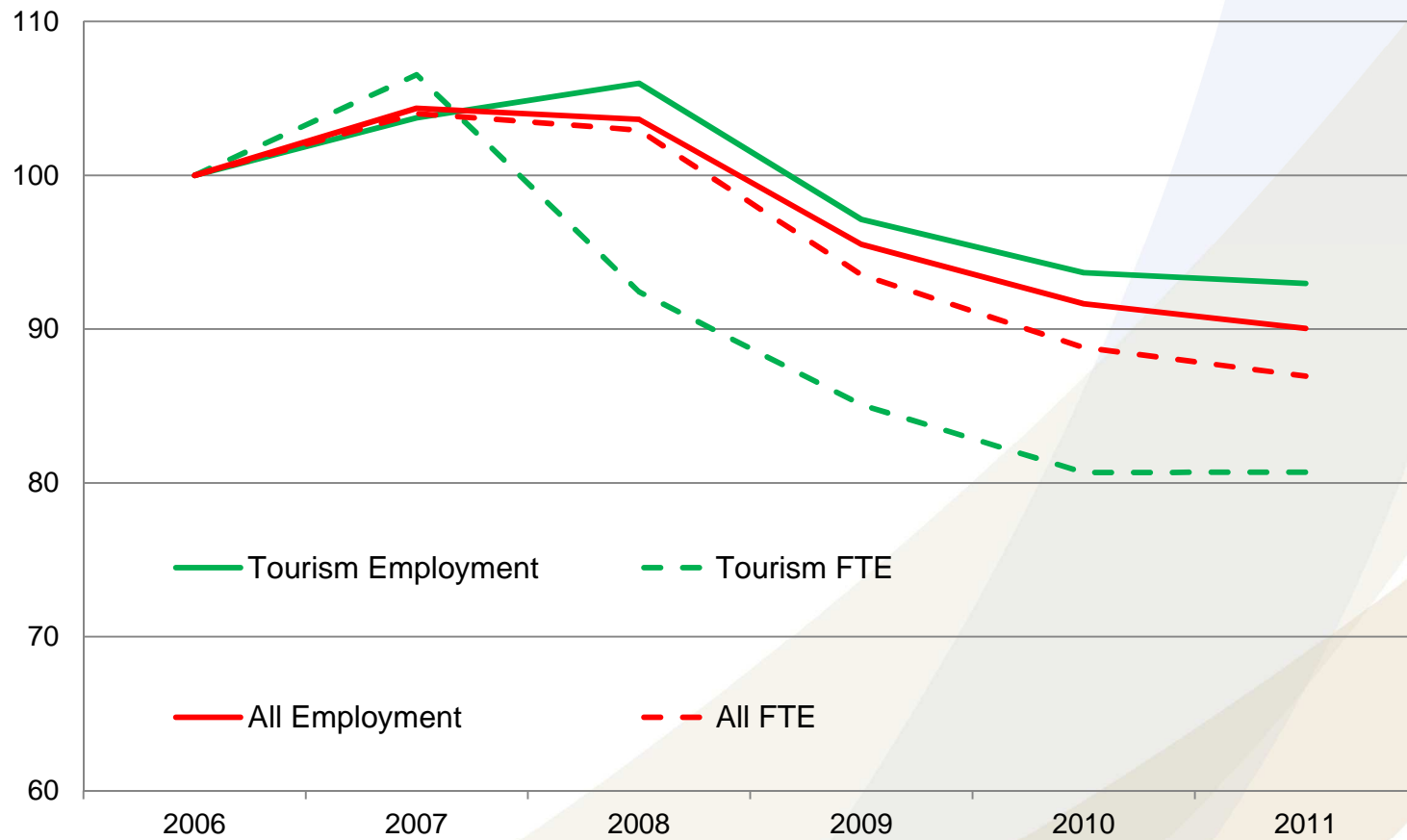
Source: Business Register



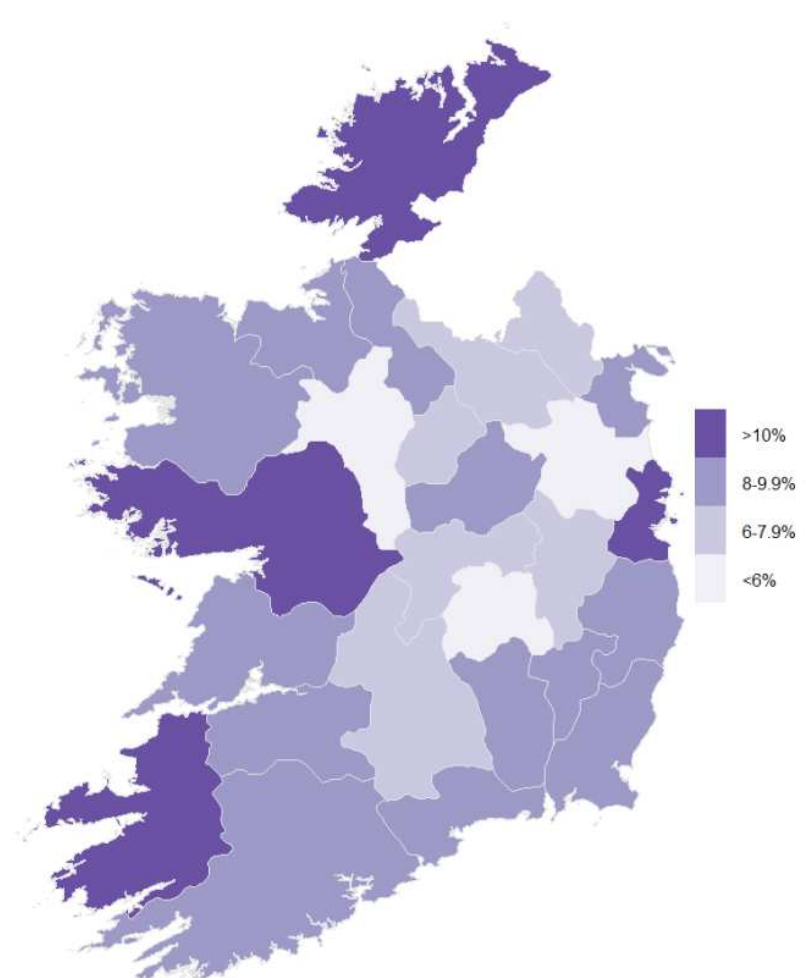
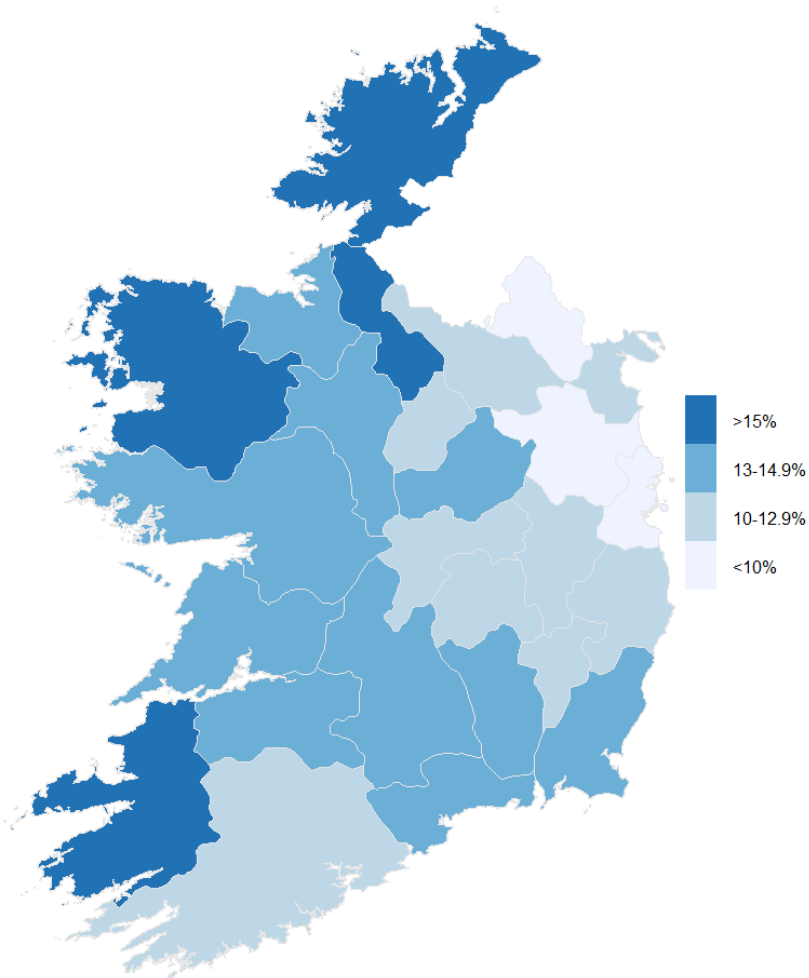
## National TDRs

	Unit	2006	2007	2008	2009	2010	2011
<i>Tourism Industries</i>							
Number of Enterprises	000's	23.0	23.3	24.1	24.0	23.5	22.7
Total Employment	000's	212.3	220.2	225.0	206.2	198.8	197.3
FTE Employment	000's	167.7	178.6	155.0	142.6	135.3	135.3
Turnover <sup>1</sup>	€ Billions	-	-	20.0	18.1	17.6	18.8
Gross Value Added <sup>1</sup>	€ Billions	-	-	7.0	6.5	6.2	6.7
<i>All Industries</i>							
Number of Enterprises	000's	217.2	221.9	222.1	212.9	201.7	195.2
Total Employment <sup>2</sup>	000's	2,053.6	2,143.1	2,128.4	1,961.4	1,882.2	1,849.1
FTE Employment <sup>3</sup>	000's	1,891.9	1,968.0	1,947.7	1,769.3	1,680.0	1,644.8
Turnover <sup>4</sup>	€ Billions	-	-	414.4	359.4	352.4	376.7
Gross Value Added <sup>5</sup>	€ Billions	-	-	161.1	147.1	142.8	147.6
<i>Tourism Dependency Ratios</i>							
Number of Enterprises	%	10.6	10.5	10.8	11.3	11.6	11.6
Total Employment	%	10.3	10.3	10.6	10.5	10.6	10.7
FTE Employment	%	8.9	9.1	8.0	8.1	8.1	8.2
Turnover	%	-	-	4.8	5.0	5.0	5.0
Gross Value Added	%	-	-	4.3	4.4	4.3	4.6

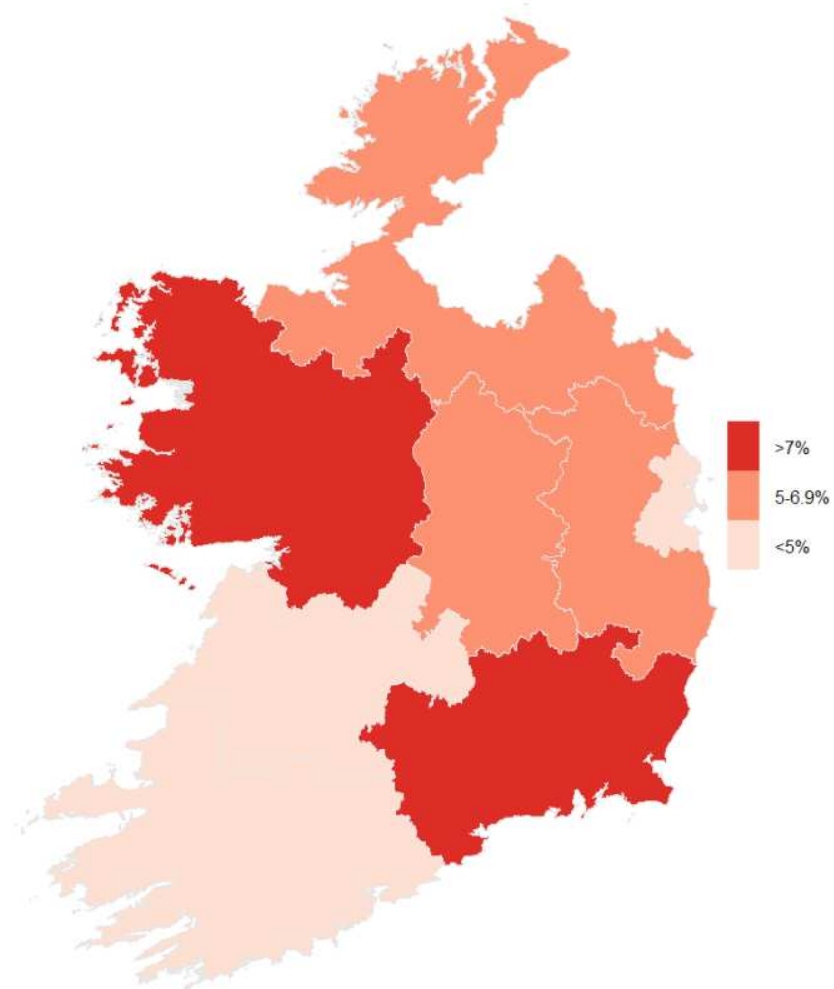
## Employment & FTEs (index: 2006 = 100)



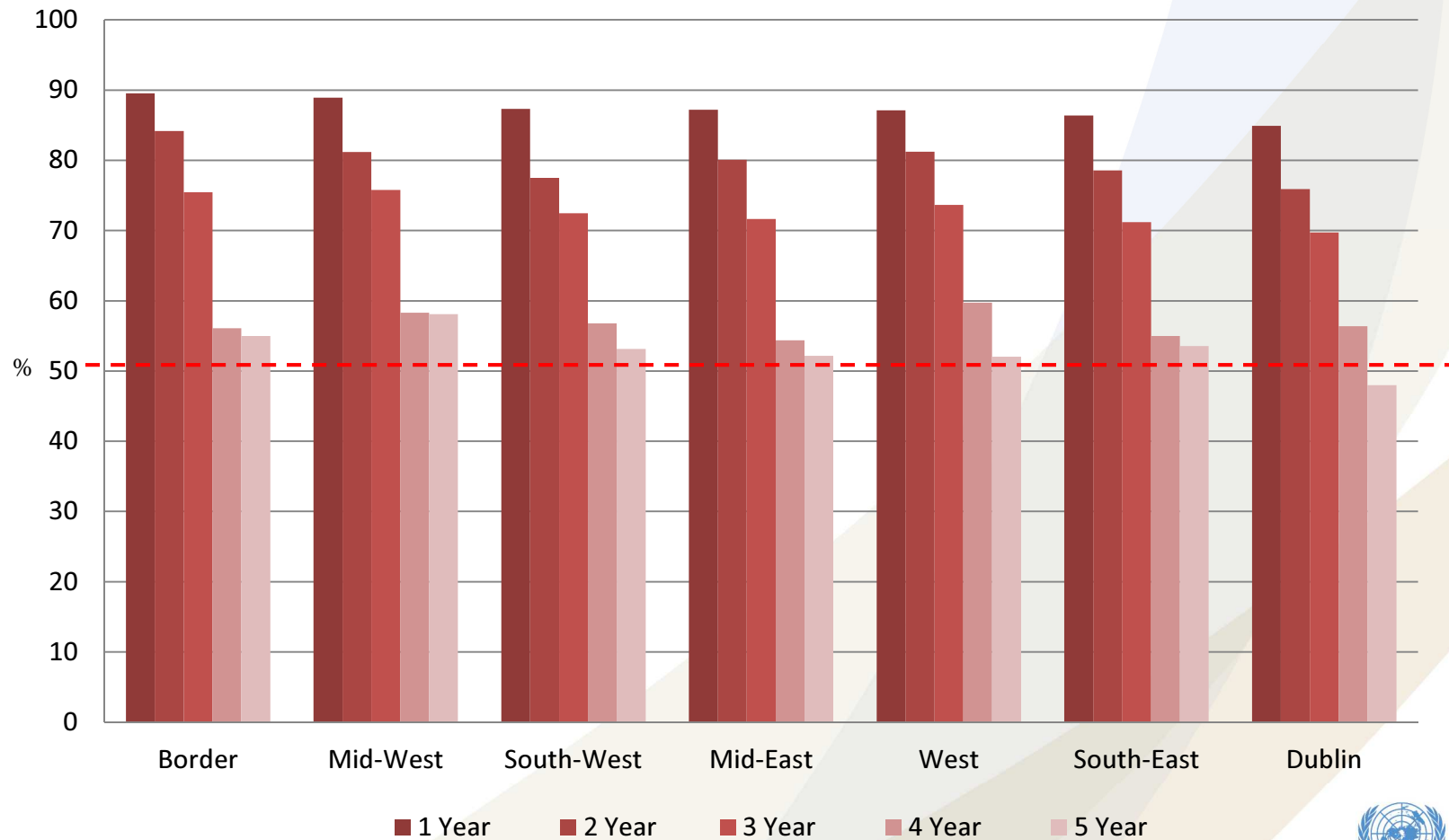
## Enterprise & Employment TDRs (by county)



## Turnover TDR (NUTS 3 region)



## Survival Rates (NUTS 3 region)



## Conclusion

- Small sample of what can be derived
- Policy relevant (complementary) indicators
- Supplement IRTS and TSA frameworks
- International comparisons for limited set of key variables (TDRs)
- Regional or small-area indicators
- Relatively cheap production system

## Discussion - Future Potential

- Link with person data
  - *Characteristics of employees & CEOs in tourism v other industries*
  - *‘Quality of work’ indicators*
- Link with other data (tax, subsidies...)
- Measure flows rather than static figures
  - *Survival of new business start ups over time*
  - *Spatial migration of workers*
  - *Job churn: do tourism workers migrate to other employment?*
  - *Job duration in tourism v other industries*

## Some References:

- Delaney, J. & S. MacFeely (2014), 'Extending Supply Side Statistics for the Tourism Sector: A new approach based on linked-administrative data', *Journal of the Social and Statistical Inquiry Society of Ireland*, (forthcoming).
- MacFeely, S., J. Delaney & F. O'Donoghue (2013), 'Using Business Registers to conduct a regional analysis of Enterprise Demography and Employment in the Tourism Industries: Learning from the Irish Experience', *Tourism Economics*, Vol. 19, No. 6, pp. 1293 – 1316.
- Sakowski, P. (2012), 'Measuring Employment in the Tourism Industries in Brazil: From National to Regional and Local level', Presented at *UNWTO/INRouTE 1<sup>st</sup> Seminar on Regional Tourism*, Venice.



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