



An Analysis of Accidents at Work in “Core” Tourism Industries

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24 – 29 May 2016, Bodrum, Turkey

8th World Conference for Graduate Research
in Tourism, Hospitality and Leisure

JUSTIFICATION



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ILO

- Every 15 seconds, a **worker** dies from a work-related accident or disease
- Every day, **6,300** people die as a result of occupational accidents or work-related diseases
- More than **2.3 million** deaths per year.

ILO

- Every 15 minutes **153** employees suffer from work-related accidents.
- **317 million** accidents occur on the job annually; many of these resulting in extended absences from work
- Economic burden of poor occupational safety and health practices is estimated at **4 per cent** of global GDP each year.

ILO

- Occupational health is a fundamental right of every worker
- It is less costly to prevent accidents than to pay medical bills.

Leading sectors in non-fatal accidents

1. Manufacturing
2. Construction
3. Wholesaling
- ..
7. Accommodation and food service

- There isn't much literature about safety and health in the context of tourism industry.



AIM OF THE STUDY

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- Analyze **work related accident** numbers in selected tourism sub-sectors.
- Evaluate how tourists arrivals and employments in tourism are related with **non-fatal accidents** at work.



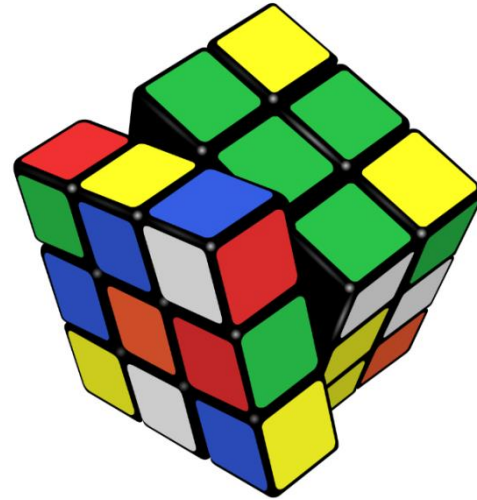
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SOME DEFINITIONS..



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Occupational safety & health (OSH)

health & safety at work

- An area concerned with the safety, health and welfare of people engaged in work or employment.
- Work related accidents
 - Occupational accidents
 - Accidents at work
- Work related diseases
 - Occupational diseases
 - Work related health problems

Accidents at work

- Discrete occurrence during the course of work which leads to physical or mental harm.
 - Fatal accidents
 - Non-fatal accidents

Non-fatal Accidents at work

- Occupational accidents that result in at least *four calendar days* of absence from work – *serious accidents*

Fatal Accidents at work

- ... that lead to the death of the victim *within one year*.

Incidence Rate

- An alternative way to analyze the information on accidents at work

$$\text{I.R.} = (\text{accidents} / \text{employed persons}) * 100.000$$

METHODOLOGY

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- Europe, as a major tourism destination
- 6 top tourism destinations in Europe are chosen for this study.
- France, Spain, Italy, Turkey, Germany, U.K.



Among NACE Rev.2 codes, there are 8 subsectors related to tourism:

- H51 – Air transport
- I55 – Accommodation
- I56 – F & B
- N77 – Rental and leasing
- N79 – Travel agency, tour op.
- R91 – Libraries,archives, museums..
- R92 – Gambling and..

- Air transport (H51), accommodation (I55) and travel agencies (N79) are chosen for this study.
- «Core tourism industries» which directly serve in tourism.



- secondary data sources
 - SBS (Structural Business Statistics)
 - LFS (Labour Force Survey) databases of *Eurostat* and of *Turkstat*
 - SGK (Social Security Council of Turkey)
 - in 2013.



FINDINGS..



TOURIST ARRIVALS



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International Tourist Arrivals		
Rank	Series ¹	Million 2013
1 France	TF	83.6
3 Spain	TF	60.7
5 Italy	TF	47.7
6 Turkey	TF	37.8
7 Germany	TCE	31.5
8 United Kingdom	TF	31.1

Source: World Tourism Organization (UNWTO) ©

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EMPLOYMENT

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	Air transport (1)	Accommodation (2)	Travel agency (3)	Core tourism industry (1+2+3)
Germany	57.309	499.935	97.611	662.078
U.K.	70.829	410.985	93.292	580.731
Spain	28.248	241.857	50.276	325.378
Italy	21.995	256.365	45.692	325.172
France	66.054	193.283	41.172	302.761
Turkey	10.068	196.514	46.268	252.850
<i>Total</i>	254.503	1.798.939	374.311	2.448.970

Source: Eurostat, SBS, 2013 (sbs_sc_1b_se_r2); Eurostat Statistics Explained, Tourism industries – employment, 2015; SGK, 2013.

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73.4 %

ACCIDENTS AT WORK



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		Germany	Spain	France	Italy	U.K.	Turkey
<i>Air transport</i>	Non-fatal	3.793	904	3.269	211	1.492	410
	<i>Incidence rate</i>	5.044	2.857	4.947	708	2.814	993
	Fatal	-	-	3	-	-	2
Accommodation	Non-fatal	4.783	8.902	9.269	3.795	3.544	4.560
	<i>Incidence rate</i>	1.060	3.676	3.400	1.608	1.045	1.707
	Fatal	-	-	4	5	-	9
<i>Travel agency</i>	Non-fatal	238	210	317	260	8	124
	<i>Incidence rate</i>	214	509	473	443	7	342
	Fatal	-	-	-	-	-	5
Core tourism industry	non-fatals	8.814	10.016	12.855	4.266	5.044	5.094
	<i>Incidence rate</i>	1.900	2.580	3.041	1.469	831	1.478
	Fatal	-	-	7	5	9	16

Source: Eurostat, Fatal accidents at work by economic activity (hsw_n2_01), non-fatal accidents at work by economic activity (hsw_n2_02); TUIK, İş kazaları ve işe bağlı sağlık problemleri araştırma sonuçları 2013 (adapted by the author)

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SERIOUS ACCIDENTS & AGE

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		Germany		Spain		France		Italy		U.K.	
		Emp%	IR	Emp%	IR	Emp%	IR	Emp%	IR	Emp%	IR
<i>Air transport</i>	<i>15-24</i>	5	6.489	3	4.501	1	?	4	2.303	6	2.422
	<i>25-34</i>	25	4.191	26	2.096	14	7.710	16	1.025	21	2.809
	<i>35-44</i>	30	4.375	37	3.257	39	5.237	36	791	39	1.717
	<i>45-54</i>	29	6.043	26	2.881	33	4.750	37	390	23	3.381
	<i>55-64</i>	11	5.361	8	3.018	13	1.696	7	411	11	7.503
<i>Accommodation</i>	<i>15-24</i>	18	1.881	6	4.333	13	4.219	8	2.794	24	688
	<i>25-34</i>	23	992	23	3.306	25	2.773	21	1.535	27	801
	<i>35-44</i>	19	772	31	3.746	22	3.813	29	1.387	17	1.436
	<i>45-54</i>	21	773	27	3.531	25	3.029	25	1.573	16	1.861
	<i>55-64</i>	19	633	13	4.416	15	4.023	17	1.489	16	1.367
<i>Travel agency</i>	<i>15-24</i>	10	?	5	408	7	281	3	1.795	12	?
	<i>25-34</i>	24	182	28	732	30	671	33	301	28	5
	<i>35-44</i>	23	221	34	409	30	482	30	455	26	7
	<i>45-54</i>	23	363	21	435	17	441	19	659	19	18
	<i>55-64</i>	20	275	12	883	16	421	15	238	15	?

Source: Eurostat, Employed persons by age groups (tour_lfs2r2); Non-fatal accidents at work by economic activity & age (hsw_n2_03)

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SERIOUS ACCIDENTS & GENDER

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		Germany	Spain	France	Italy	U.K.	Turkey
Air transport	Male %	51.4	64.2	66.7	60.1	63.2	74.5
	IR	10.639	3.498	4.416	1.329	2.677	490
	Female %	48.6	35.8	33.3	39.9	39.8	25.5
	IR	2.349	2.664	6.017	400	1.123	2.695
Accommodation	Male %	34.1	40.9	38.2	48	42.7	70
	IR	1.307	3.931	5.318	1.566	1.084	1.811
	Female %	65.9	59.1	61.8	52	57.3	30
	IR	774	3.507	4.004	1.401	697	1.650
Travel agency	Male %	36.4	29.4	28.5	30.6	41.7	66.1
	IR	318	676	621	1.148	10	1.649
	Female %	63.6	70.6	71.5	69.4	58.3	33.9
	IR	201	310	527	313	7	293

Source: Eurostat, Employment by sex, age and detailed economic activity (lfsa_egan22d), Non-fatal accidents at work by economic activity & sex (hsw_n2_01). IRs are calculated by the author.

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CHANGES THROUGH TIME



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Rates of change

non-fatal numbers for 2013
non-fatal numbers for 2008

		Germany	Spain	France	Italy	U.K.
Air transport	2008->2013	1.30	.37	.98	2.77	1.75
Accommodation	2008->2013	.41	.58	.98	.66	.99
Travel agency	2008->2013	.95	.53	.85	.54	.05

Source: Eurostat, Non-fatal accidents at work by economic activity & sex (hsw_n2_01). Changes from 2008 to 2013 are calculated by the author.

Non-fatal numbers by year

		Germany	Spain	France	Italy	U.K.
Air transport	2008	2900	2427	3317	76	852
	2013	3793	904	3269	211	1492
Accommodation	2008	11560	15158	8833	5685	3552
	2013	4783	8902	8709	3795	3544
Travel agency	2008	248	391	266	481	150
	2013	238	210	228	260	8

Source: Eurostat, Non-fatal accidents at work by economic activity & sex (hsw_n2_01).

Rates of change

non-fatal numbers for tourism sub-sectors in 2008 2013

non-fatal numbers for all NACE sectors in 2008 2013

		Germany	Spain	France	Italy	U.K.
Air transport	2008	.30	.35	.52	.01	.33
	2013	.44	.24	.57	.06	.61
Accommodation	2008	1.22	2.2	1.4	1.1	1.4
	2013	.56	2.4	1.5	1.2	1.5
Travel agency	2008	.03	.06	.04	.10	.06
	2013	.03	.06	.04	.08	.003
Core tourism industry	2008	1.56	2.6	1.9	1.2	1.8
	2013	1.03	2.7	2.2	1.3	2.1

Source: Eurostat, Non-fatal accidents at work by economic activity & sex (hsw_n2_01). Percentages are calculated by the author. Formula = (non-fatal numbers in subsector / non-fatal numbers in all NACE sectors for each country and for each year) * 100.

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CONCLUSION AND IMPLICATIONS

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	Arrivals	Core industry		Air transport		Accommodation		Travel agency	
		Employment	Non-fatal	Employment	Non-fatal	Employment	Non-fatal	Employment	Non-fatal
Germany	5	1	3	3	1	1	5	1	5
Spain	2	3	2	4	3	4	1	3	1
France	1	5	1	2	2	6	2	6	2
Italy	3	4	5	5	6	3	4	5	3
U.K.	6	2	6	1	4	2	6	2	6
Turkey	4	6	4	6	5	5	3	4	4

	Employment	Non-fatal	IR rank
Air transport	254503	10079	1
Accommodation	1798939	34853	2
Travel agency	374311	1157	3

LIMITATIONS



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- 6 leading destinations in tourism
 - top ten tourist destinations in the world
- Core tourism industries
 - food and beverage industry
- Accidents at work
 - work-related diseases
 - relationships between lower and upper educated, temporary and permanent workers..
- Available data
 - micro data from Eurostat and Turkstat
 - LFS or other estimations

- «Lies,
– damned lies,
– and *statistics*»

Researchers should avoid incorrect nature of the statistics..



thank you!

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