

# **A Panel Analysis of Bilateral Foreign Direct Investments in the International Tourism Industry**

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- FDI flows in tourism activities increased rapidly until 2008
  - Rise of new locations (e.g. Middle East, China, Russia, Singapore)
  - (relative) attractiveness of the EU for FDI in tourism activities declined
  - Comprehensive international FDI statistics in tourism does not exist (Endo 2006) =>hospitality accounts for the bulk
  - Research questions:
    - What are the main determinants of FDI into tourism and accommodation?
    - Role of market size, its growth, distance, regulations, cost based factors
  - Main contribution:
    - First estimates of the determinants of FDI in tourism activities using a FDI gravity model based on comparable international data (fdimarkets data)
    - Stylized facts on FDI in tourism across destination and source countries

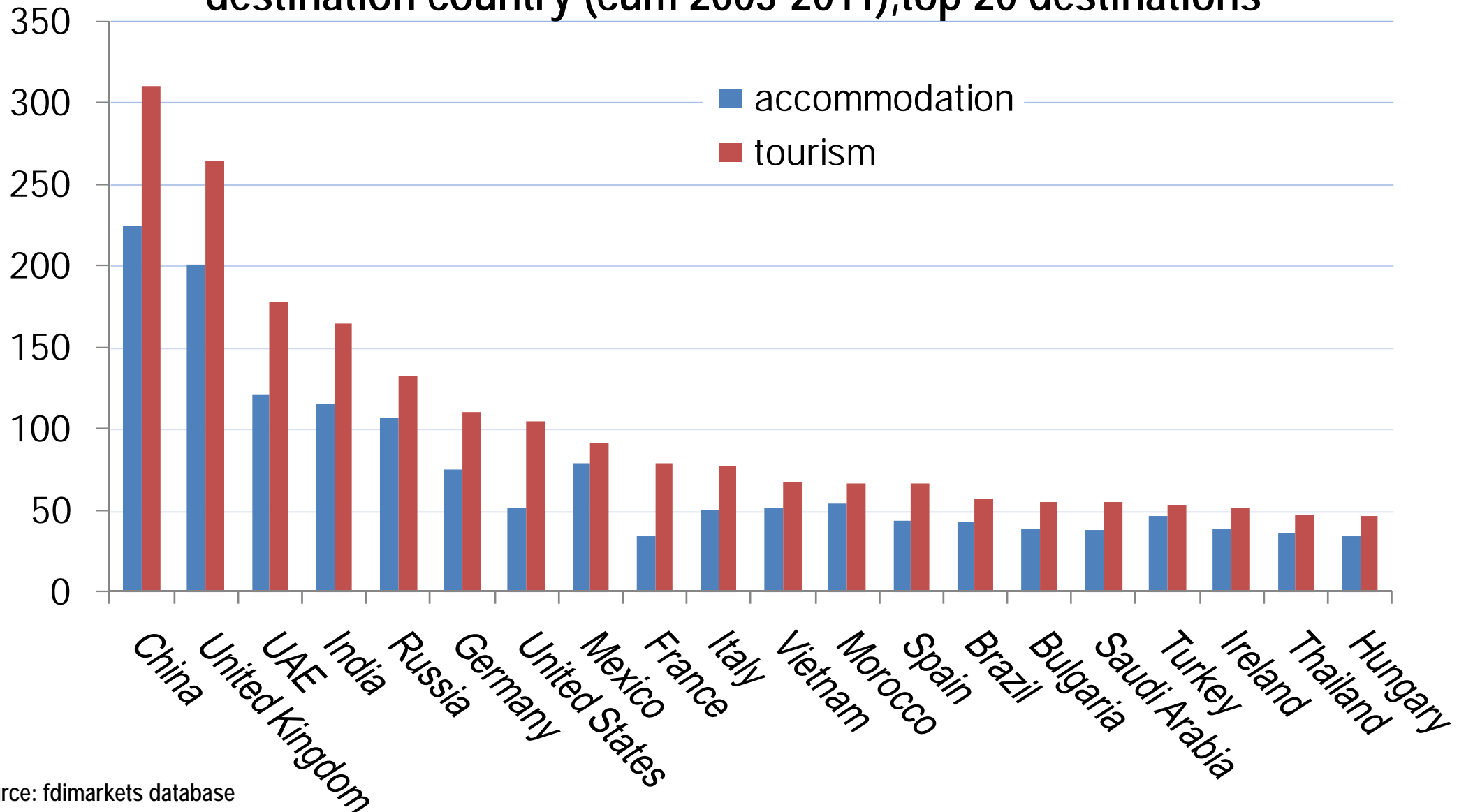
## ■ Methodology

- FDI gravity equation using data for 184 host and 115 home country pairs for the period 2003-2011 =>21,500 home-host country pairs and 115,000 obs.
- Panel count data models (FE and RE negative binomial regression, QML FE poisson)

## ■ Limitations:

- FDI activity is restricted to new foreign investments (e.g. new hotel builds)
- cross border M&As not included => bias towards emerging markets
- Other types of entry in foreign markets are important: management contracts, franchise agreements, leasing agreements => no information available
- causal effects can not be identified

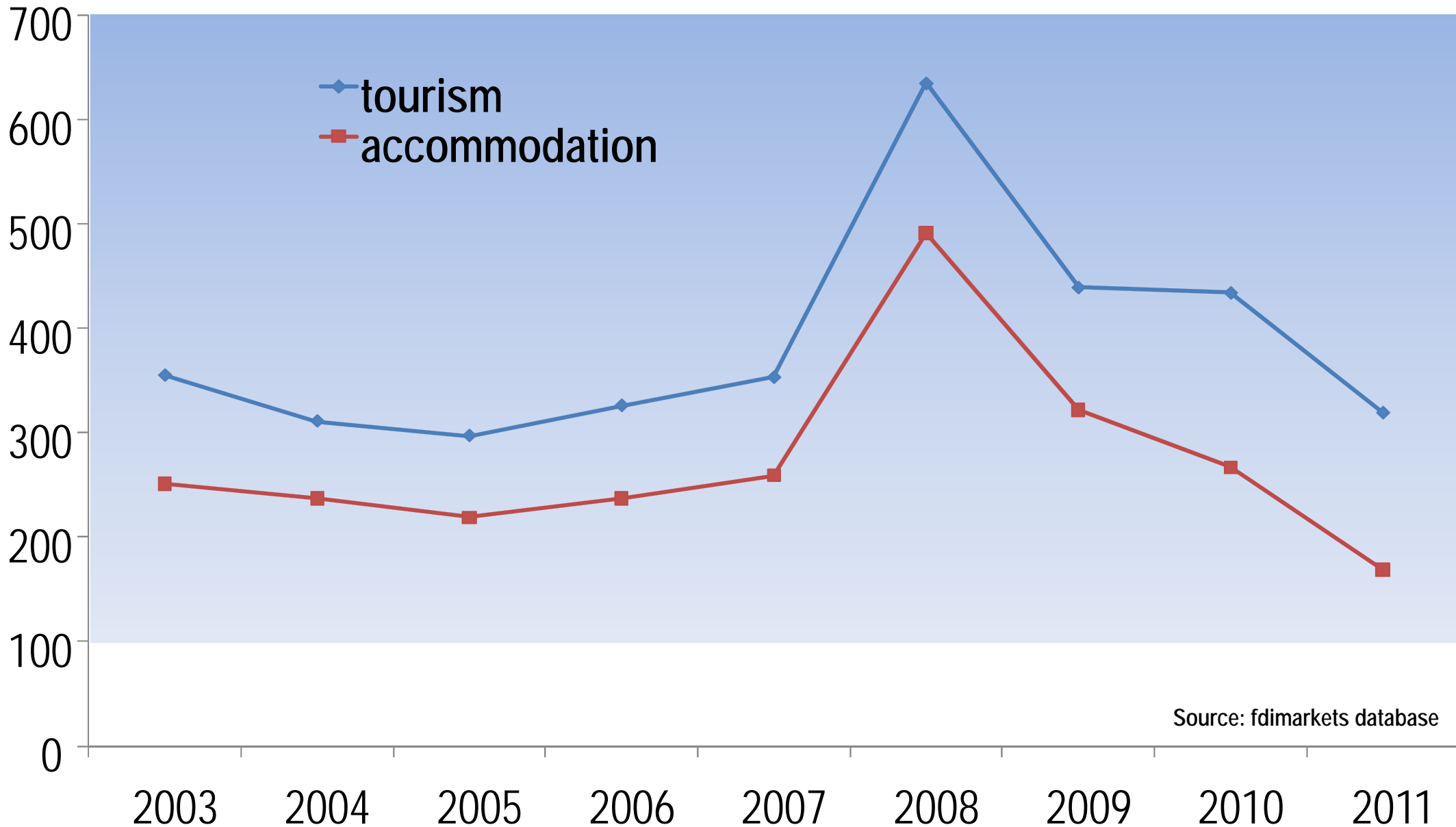
Number of FDI projects in tourism activities and accommodation industry by destination country (cum 2003-2011), top 20 destinations



Source: fdimarkets database

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Trends in the number of FDI projects in tourism and accommodation



Source: fdimarkets database

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- Internationalisation of hotel industry started after WWII (Quek, 2012)
  - Entry mode in foreign markets (Endo 2006, JTMA)
    - Equity investment (minority, majority ownership, JVs)
    - Leasing agreement
    - Management contract
    - Franchise agreement
  - Management contracts is the most common form followed by FDI (Contractor, Kundo 2000)
  - Dunning & McQueen (1982) non equity forms account for two thirds
  - franchising dominant form among US investors (Endo 2006)
  - Equity investments dominate in developed countries => bias
  - Cross-border M&As highly prevalent in the tourism industry (Johnson & Vanett 2005)

- OLI framework (Dunning; McQueen 1982)
  - ownership specific advantages of the parent company
  - Locational advantages: (i) demand side factors, (ii) knowledge-based factors, (iii) factor costs and (iv) product market regulations
  - Internationalization advantages
- determinants of FDI are no different from other industries (Endo 2006; Ramon Rodriguez 2002):
  - Gravity factors: geographical distance, host and parent country
  - transaction costs: common language, cultural factors, regional trade agreements
  - Level of economic development, factor endowment, supply of qualified workers
  - FDI regime, taxation, quality of hard and soft infrastructure, product market regulation, trade barriers

- Size, growth and stage of overall tourism market (Kundu 1994)
- General infrastructure for tourism (Dunning & McQueen 1981)
- Country's level of risk (Ramon Rodriguez, 2002)
- Number and type of attractions (Johnson & Vanetti 2005)
- geographical concentration ("herd behaviour" or "follow the leader")
- Climate factors (average rainfall, sunshine hours)
- Previous literature:
  - Standard FDI statistics do not contain information on FDI in tourism (Endo 2007)
  - Kundu and Contractor (1999): number of rooms and properties in 67 destinations
  - Ramon Rodriguez (2002), questionnaire on 26 spanish hotel chains operating abroad
  - Zhang et al, (2013) number of multinational hotels in China at the regional level



$$FDI_{ijt} = \exp(X_{ijt} \beta + \varepsilon_{ijt})$$

$$X_{ijt} = \left( \ln GDPHOME_{it-1}, \ln GDPHOST_{jt-1}, \ln DIST_{ij}, CTAXHOME_{it-1}, CTAXHOST_{jt-1}, \right. \\ \left. \ln WHOME_{it-1}, \ln WHOST_{jt-1}, Z_{1it-1}, Z_{2jt-1}, Z_{3ij}, \text{host}_j, \text{home}_i, \lambda_t, \alpha_{ij} \right)$$

- FDI: number of FDI projects in tourism or subsector accommodation
- GDPHOME, GDPHOST: home & host country GDP in const US-\$
- DIST: geographical distance between the host and home country in km
- CORPTAXHOME, CORPTAXHOST, home and host statutory corporate tax rate
- WHOME, WHOST wage costs of home, host
- alpha\_ij denotes the random or fixed (bilateral) host-parent country effects
- RE model Host, home fixed country effects (convergence problems)

- Level of development of the parent and the host country
- product market regulation indicators
  - FDI regulatory restrictiveness index
  - strength of legal rights, index for getting credits/strength of investor protection
  - cost of starting a business, time required to start a business
- Labour market regulation indicators
- fixed broadband Internet subscribers, other infrastructure indicators
- Zij:time invariant variables: shared border, sharing the same language, colonial link
- Estimation approach:
  - RE negative binomial model
  - FE binomial model (HHG 1984) (pseudo FE) XTNBREG,FE
  - FE poisson estimator (Wooldridge 1999) XTPOISSON

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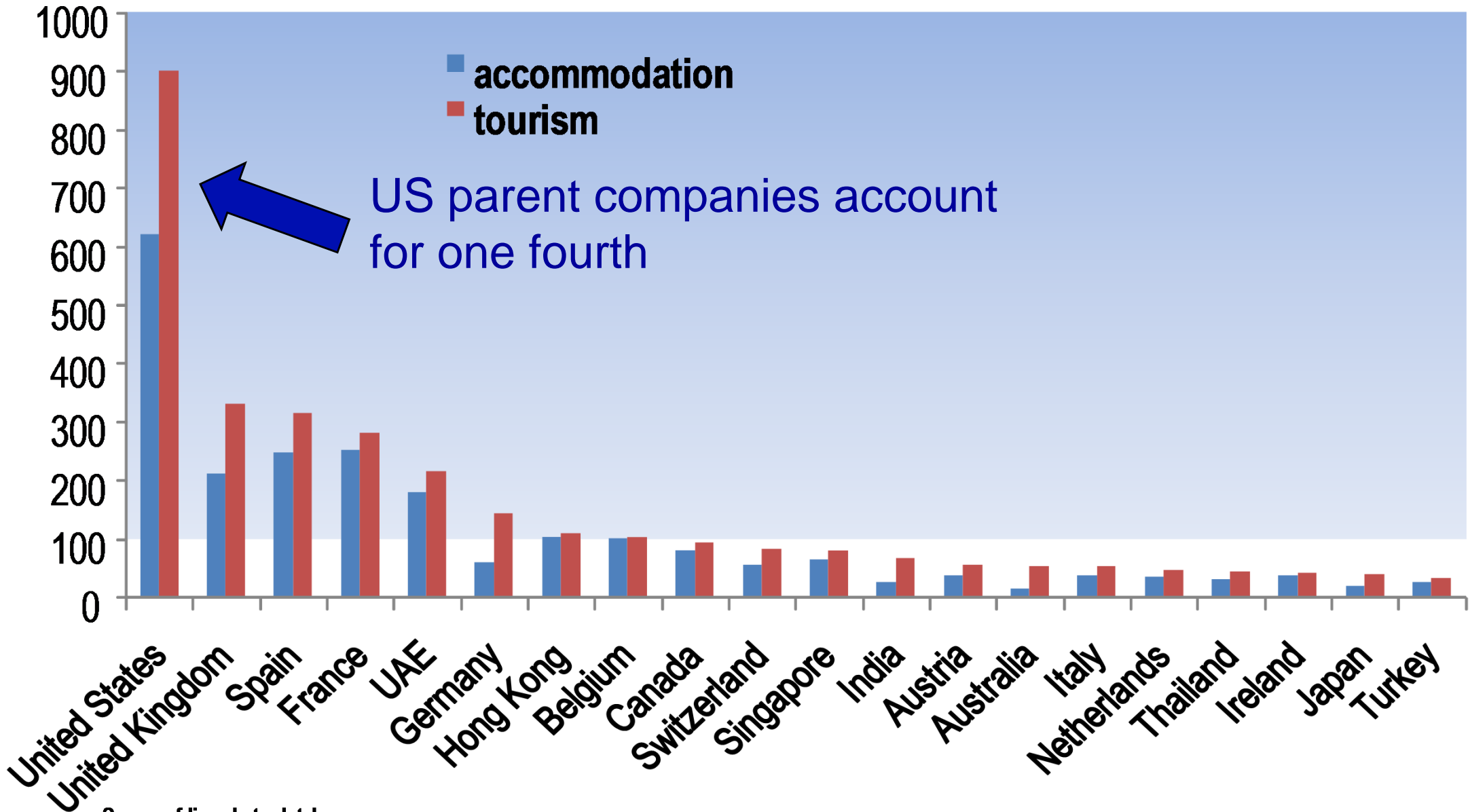
## fDi Markets database

- Worldwide register of about 110,000 international investment projects
- Definition of FDI: new foreign establishments and expansions of existing
- derived from media sources
- information on the types of FDI projects categorised by function, cluster, name and national origin of parent and investing company, destination country, number of jobs generated by FDI, amount of capital flow
- Tourism is one of 14 clusters; diverse activity of which accommodation is a subcategory
- No of parent countries 117, no of host 185, no of years 8, 2003-2011
- Dep. var. # of bilateral FDI projects in tourism: ranging from zero FDI flows in 96 percent of the cases to 116 FDI projects
- used by UNCTAD in the WIR and in the IB literature (Hahn et al., 2011; Di Minin and Zhang, 2010; Castellani & Palmero, Zanfei, 2013)

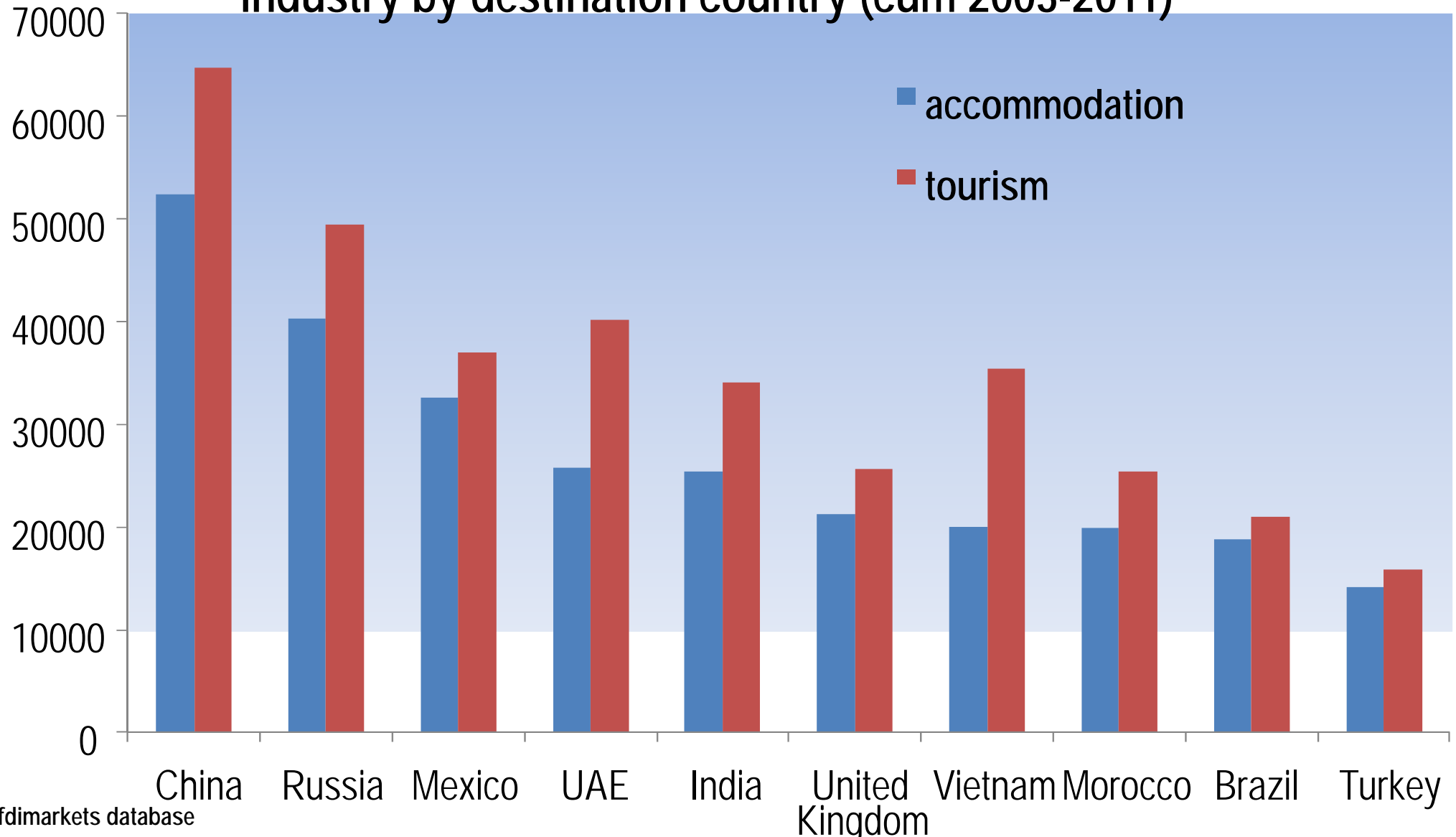
	share of FDI projects
Accommodation	70
Travel arrangement & reservation service	16
Performing arts, spectator sports	5
Amusement & theme parks	3
Software publishers, except video games	2
Gambling industries	1
Food services	1
Real estate services	0
Internet publishing & broadcasting & we	0
Other support services	0
Other amusement & recreation industries	0
other	2

Source: fdimarkets database

# of FDI projects in tourism and accommodation industry by parent country '03-'11



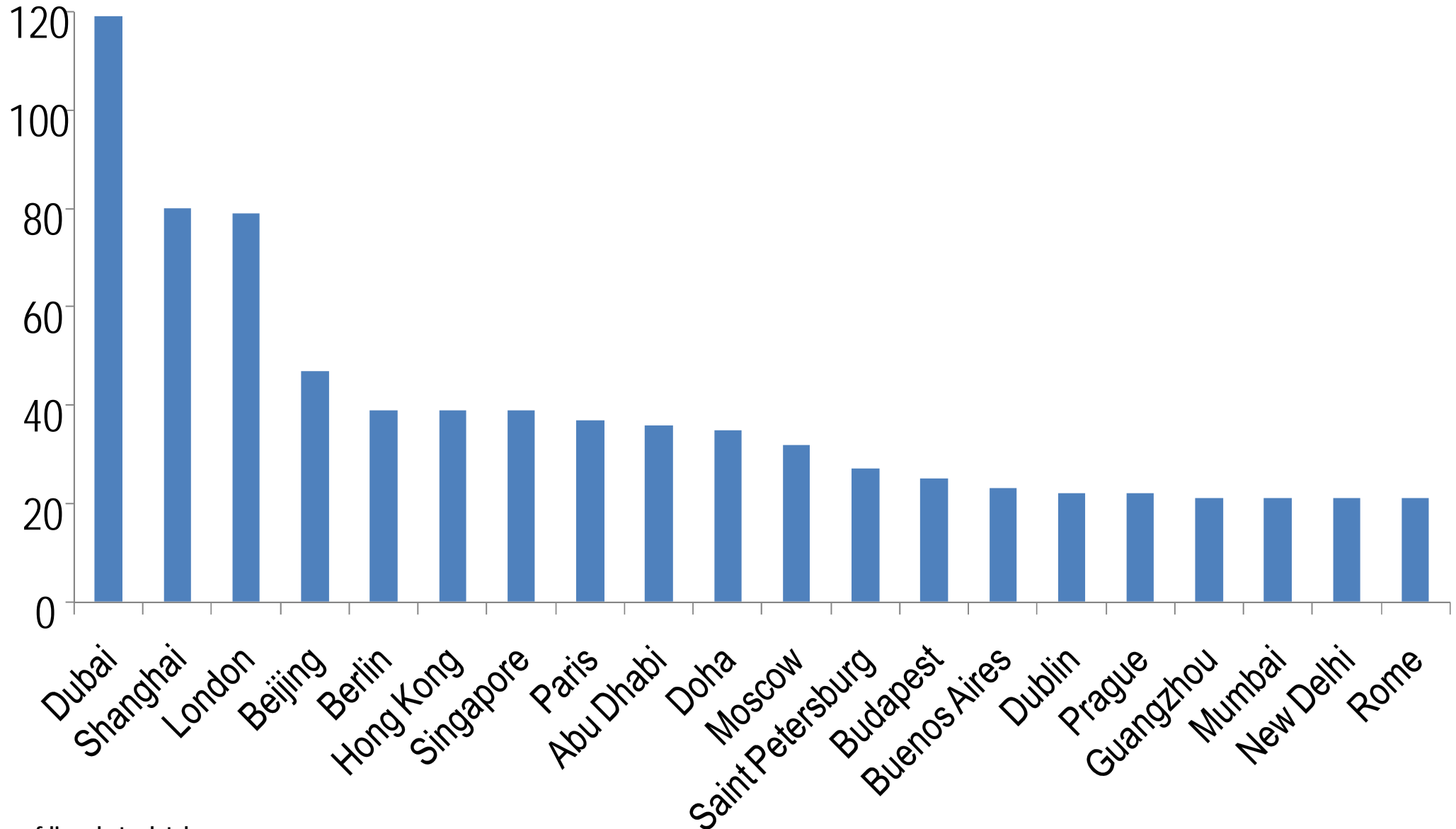
Number of jobs generated through FDI projects in tourism and accommodation industry by destination country (cum 2003-2011)



Source: fdimarkets database

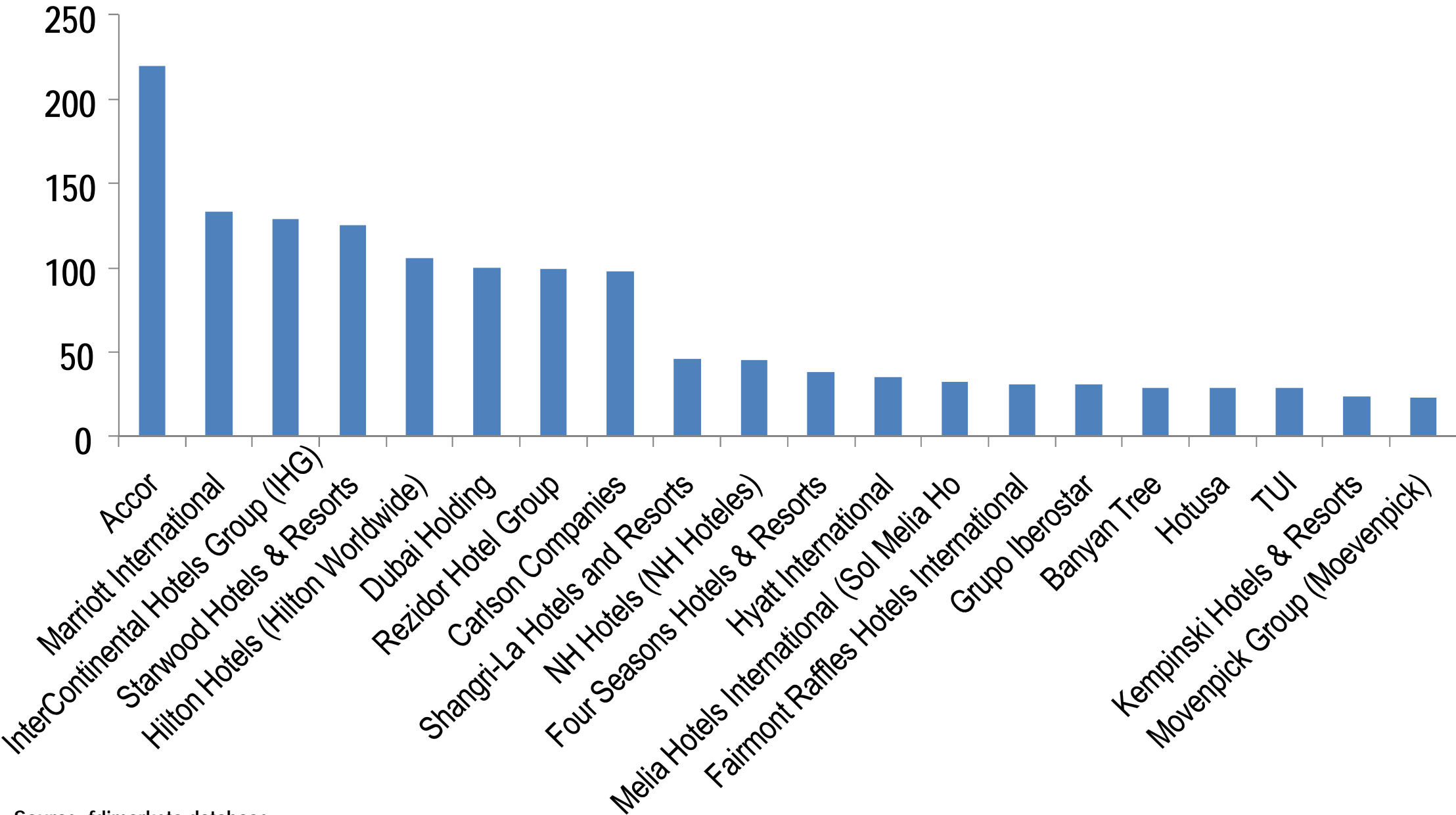
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## Number of FDI projects in tourism and accommodation industry at the city level





# list of the most important parent companies in the tourism /accommodation ind





- Negative binomial fixed effects estimator:
  - Host GDP and host GDP per capita are significant =>market size, and level of development matter!
  - Minimum wages are significant
  - Time of starting a business is highly significant
  - AIDS/HIV penetration rate is partly significant
  - Growth rate is not significant, distance partly sig.
  - Larger number of other infrastructure and doing a business are n.s.
  - Robustness check: Fixed effects poisson model suggested by Wooldridge (1999)
- Negative binomial random effects estimator
  - Similar results, however corporate taxes, former colony relationship

	FDI in accommodation		FDI in tourism	
	Coef.	z	Coef.	z
log distance	-0.32	-1.61	-0.34 **	-2.14
shared border	1.21 **	2.38	0.70 *	1.78
common language	2.36	1.37	0.76	0.90
former colony	-0.26	-0.55	0.33	0.82
host log GDP (cons 2000 US\$)	0.37 **	2.40	0.18	1.56
parent log GDP (const 2000 US\$)	0.38 ***	3.02	0.48 ***	4.75
host log GDP per capita (const 2000 US\$)	0.20 **	2.41	0.14 **	2.13
parent log GDP per capita (const 2000 US\$)	0.11	0.40	-0.07	-0.29
log hourly minimum wage	-0.40 **	-2.01	-0.23	-1.41
corporate tax rates	0.96	0.52	0.70	0.44
GDP per capita growth (annual %)	0.01	0.55	0.02	1.42
Prevalence of HIV, total (% of pop. 15-49)	-0.15 **	-2.08	-0.10	-1.61
<i>Time required to start a business</i>	-0.01 ***	-3.25	-0.01 **	-3.38
# of obs	2427		3327	
no of host parent country pairs	<sup>17</sup> 375		514	

	FDI in accommodation			FDI in tourism		
	coef		z	coef		z
log distance	-0.86	***	-12.63	-0.83	***	-14.71
shared border	1.14	***	7.01	1.00	***	7.32
common language	-0.17		-0.64	-0.13		-0.59
former colony	0.91	***	4.25	1.00	***	5.54
host log GDP (const 2000 US\$)	0.65	***	14.21	0.65	***	17.38
parent log GDP (const 2000 US\$)	0.80	***	20.50	0.84	***	25.65
host log GDP per capita (const 2000 US\$)	0.34	***	4.60	0.24	**	4.09
parent log GDP per capita (const 2000 US\$)	0.51	***	8.12	0.40	***	8.08
log hourly minimum wage	-0.40	***	-6.17	-0.32	***	-6.08
corporate tax rates	-3.47	***	-3.56	-3.25	***	-3.96
GDP per capita growth (annual %)	0.01		0.92	0.02	*	1.86
Prevalence of HIV, total (% of pop. ages 15-49)	-0.02		-1.01	-0.02		-1.02
<i>Time required to start a business</i>	0.00	*	-1.77	0.00	**	-2.23
# of obs	117,690			117,690		
# of groups	21,151			21,151		

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- Gravity factors play a significant role in determining FDI activity in the tourism and accommodation industry
  - Level of development and entry regulation costs in the host country are important
  - Minimum wages are partly significant
  - Distance is only weakly significant => end of distance
  - Interesting finding: HIV penetration rate is partly significant
  - Results for the FDI determinants differ between FDI in accommodation and FDI in tourism

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- Separate estimation results for different host regions (high and low wage countries)
  - Are the impact of the FDI determinants different for US investors, European and Asian investors?
  - Conditional logit models
  - Location choice models for hotel chains
  - Zero- inflated negative binomial estimator with FE or RE effects

THANKS FOR YOUR ATTENTION !