

Classification of the quality of estimates (see also WP1)

I. High quality	II. Medium quality	III. Low quality	IV. Low quality with plausibility warning
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Abbreviations

IFR: Irregular Foreign Residents	IFW: Irregular Foreign Workers	Incl. EU: Estimate includes EU-citizens	FTE: Full-time equivalents	Abs.: Estimate of absolute numbers	Rel.: Estimate of subgroup in % of total
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<u>Groups</u>	<u>Definition</u>	<u>Year</u>	<u>Estimate</u>			<u>Main data source</u>	<u>Short explanation</u>	<u>Reference</u>
			minimum	central	maximum			
<u>Total stocks of irregular foreign residents</u>								
IFR – estimate 1	IFR	2003		1 000 000		multiple sources	Academic expert estimate based on rough considerations of available statistical data and qualitative information, no closer explanation	Cyrus 2004
IFR – estimate 2	IFR	2003	1 000 000		1 500 000	multiple sources	Academic expert estimate based on two intense local studies (see Munich 1), multiplier for national extrapolation	Alt 2003
	IFR	2004	500 000		1 000 000	multiple sources	Adjustment of 2003 under consideration of EU accession	Alt 2004
IFR – estimate 3	IFR	2003	100 000			enforcement data	Academic expert estimate based on Police Criminal Office data on persons residing illegally (mixed border and internal enforcement data), assumed multiplier of 1	Lederer 2004 (for 2003) CLANDESTINO Germany 2008 (for 2004-2006)
		2004	81 040					
		2005	64 747					
		2006	64 605					
IFR – estimate 4	IFR	2003	76 223			enforcement data	Ministry expert estimate based on Police Criminal Office data on persons residing illegally (internal enforcement data), assumed multiplier of 1	Kreienbrink and Sinn 2006
		2004	62 825					
		2005	49 196					
IFR – estimate 5	IFR	2005	280 000		680 000	enforcement data	Academic expert estimate with multiplier method based on police apprehension data	Vogel 2009, Vogel and Gelbrich 2010, Vogel 2012
		2006	240 000		560 000			
		2007	200 000		450 000			
		2008	180 000		420 000			
		2009	140 000		330 000			
		2010	100 000		400 000			

Groups	Def.	Year	Estimate			Main data source	Short explanation	Reference	
			minimum	central	maximum				
Total stocks of irregular foreign workers									
IFW – estimate 1	IFW incl. EU/FTE	2005		1 002 000		economic data	Academic expert estimate derived from econometric estimate of shadow economy, assumed share of foreigners in shadow economy	Enste and Schneider 2006	
Total stocks for specific cities or regions									
abs. 1	Berlin – estimate 1	IFR	2000	100 000		unknown	NGO expert estimate without explanation	Berliner Arbeitsgemeinschaft der Freien Wohlfahrtspflege 2000	
abs. 2	Munich – estimate 1	IFR	2003	40 000		50 000	multiple sources	Academic expert estimate based on demographic and enforcement data, expert opinions and irregular migrant interviews in Munich	Alt 2003
abs. 3	Munich – estimate 2	IFR	2003	30 000		40 000	administrative data	Academic expert estimate: For Leipzig adjustment of older local study with similar scope as Munich 1, for other cities, demographic multiplier derived from Munich and Leipzig study (1 to 3 % of population) and adjusted in unclear manner (usually assuming higher percentages)	Alt 2004
	Leipzig			8 000		15 000			
	Berlin – estimate 2			100 000		250 000			
	Hamburg			50 000		100 000			
	Frankfurt am Main – estimate 1			25 000		30 000			
	Bonn				4 000				
abs. 4	Frankfurt am Main – estimate 2	IFR	2005	25 000		50 000	expert opinion	Academic expert estimate: extrapolation in time of estimate for Frankfurt am Main given by Alt 2004 (abs. 2)	IWBF 2006

Groups	Definition	Year	Estimate			Main data source	Short explanation	Reference	
			minimum	central	maximum				
Gender composition									
abs.	/								
rel. 1	m	IFR	2005, 2006	40%		70%	enforcement data, support service data	CLANDESTINO country expert presented Police Criminal Office data on apprehended persons because of illegal stay, and data on irregular migrants seeking health care in Berlin as indicators for gender composition, assessment as min/ max by HWWI	CLANDESTINO Germany 2008 WP1 2008
	f			30%		60%			
Age composition									
abs.	/								
rel. 1	Children	IFR	2006	1%			enforcement data	CLANDESTINO country expert presented Police Criminal Office data on apprehended persons because of illegal stay as indicator for age composition, calculation of percentages and assessment as min/ max by HWWI	CLANDESTINO Germany 2008 WP1 2008
	Youths/ adults					95%			
	Aged people			4%					
rel. 2	20-40	IFR	2004		70%		expert opinion	CLANDESTINO country expert estimate based on considerations of Police Criminal Office data and qualitative information, quantified by HWWI	CLANDESTINO Germany 2008
Nationality composition									
rel.	Turkey	IFR	2006		12%		enforcement data	CLANDESTINO country expert presented Federal Criminal Office data on apprehended persons because of illegal stay as indicator for nationality composition, calculation of percentages by HWWI	CLANDESTINO Germany 2008
	Romania				12%				
	Bulgaria				7%				
	Serbia and Montenegro				5%				
	Russia				5%				
	Other				59%				

Groups	Definition	Year	Estimate			Main data source	Short explanation	Reference	
			minimum	central	maximum				
Economic sector composition									
abs. 1	Agriculture – estimate 1	IFW	2001		300 000		administrative data	Trade union expert estimate: multiplier 1 applied to number of legally employed persons	IG BAU 2001
abs. 2	Agriculture – estimate 2	IFW/ FTE	2001		60 000		economic data	Scientific study estimate: residual between estimated demand for seasonal workers and number of registered seasonal workers	Hess 2006
abs. 3	Construction	IFW	2000		300 000		multiple sources	Trade union estimate without explanation	IG BAU 2001
abs. 4	Care – estimate 1	IFW/ Eastern Europe	2006	100 000			Unknown	Media estimate without explanation	Die Zeit 2007
abs. 5	Care – estimate 1	IFW	2004	50 000		70 000	unknown	Academic expert estimate without explanation	Kondratowitz 2005
abs. 6	Care – estimate 2	IFW	2005			145 000	multiple sources	CLANDESTINO country expert estimate: long-term care insurance data for persons looked after in private households assessed as maximum estimate	CLANDESTINO Germany 2008
abs. 7	Workers in companies	IFR/ working	2006			304 199	enforcement data	CLANDESTINO expert estimate on the basis of labour inspection data, multiplier from IFR cases in total inspected persons, applied to labour force	CLANDESTINO Germany 2008
abs. 8	Workers in companies	IFW incl. EU	2006			1 258 119	enforcement data	CLANDESTINO expert estimate on the basis of labour inspection data, multiplier from IFW cases (no work permit) in total inspected persons, applied to labour force	CLANDESTINO Germany 2008
Other subgroups									
Sex workers	IFR/ working		2007			108 000	expert survey	CLANDESTINO country expert estimate based on surveys among public health services and NGOs	CLANDESTINO Germany 2008

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Annotations

Total stocks of irregular foreign residents: [back to table](#)

IFR – estimate 1: Low quality due to a lack of documentation how different forms of information were merged into one estimate (CLANDESTINO Germany Report: 38).

IFR – estimate 2: Low quality due to a lack of empirical basis, particularly for extrapolation to national level (CLANDESTINO Germany Report: 38).

IFR – estimate 3: Minimum estimates of low quality as there is no assessment of the degree of underestimation; mixed border and internal enforcement data (CLANDESTINO Germany Report: 40).

IFR – estimate 4: Minimum estimates of low quality as there is no assessment of the degree of underestimation (CLANDESTINO Germany Report: 41).

IFR – estimate 5: Careful estimate; medium quality due to lack of empirical foundation for crucial assumptions (Vogel 2009: 10, 11; Gelbrich/ Vogel 2010)

Total stocks of irregular foreign workers: [back to table](#)

IFW – estimate 1: Low quality due to a lack of documentation, namely a lack of transparency of used indicators and of used methods, no transparency of calculation of the share of foreigners (CLANDESTINO Germany Report: 51).

Total stocks for specific cities: [back to table](#)

Absolute estimate 1: Low quality due to a lack of documentation, in particular on applied method (CLANDESTINO Germany Report: 42).

Absolute estimate 2: Careful estimate; medium quality particularly due to a lack of sufficient information about the weight of the used indicators (CLANDESTINO Germany Report: 43).

Absolute estimate 3: Low quality due to a lack on empirical foundation for extrapolation of 1-3% share irregular residing foreigners for cities; no consideration of local specifics. No explanation why Munich estimate was adjusted (CLANDESTINO Germany Report: 43).

Absolute estimate 4: Low quality due to a lack of documentation, mainly on empirical foundation of extrapolation in time (CLANDESTINO Germany Report: 42).

Gender composition: [back to table](#)

Relative estimate: Compositional estimates (data from CLANDESTINO Germany Report: 44, 45); combination of two indicators from data with opposing uni-directional bias which allows for minimum and maximum assessment; for logic, see WP1. Low quality due to weak underlying data: local health care data which cover a small-scale population is not an appropriate indicator for assessment for the whole country.

Age composition: [back to table](#)

Relative estimate: For minimum and maximum assessment logic, see HWWI 2008. Low quality as data can include a small number of regular residents; no information on degree of under- and overestimation (CLANDESTINO Germany Report: 46).

Relative estimate 2: Low quality as a very rough verbal assessment (CLANDESTINO Germany Report: 46).

Nationality composition: [back to table](#)

Relative estimate: Low quality due to mixed internal and border enforcement data and unclear bias (CLANDESTINO Germany Report: 48).

Economic sector composition: [back to table](#)

Absolute estimate 1: Low quality due to weak empirical data for applied multiplier and inclusion of all kinds of regulation breaches. Warning: There are indications that the estimate for one sector is implausibly high (CLANDESTINO Germany Report: 56).

Absolute estimate 2: Careful estimate, partly relying on insufficient data (CLANDESTINO Germany Report: 56).

Absolute estimate 3: Low quality due to a lack of documentation, partly relying on insufficient data. Warning: There are indications that the estimate for one sector is implausibly high (CLANDESTINO Germany Report: 57).

Absolute estimate 4: Minimum estimate of low quality due to a lack of documentation, mainly on applied method (CLANDESTINO Germany Report: 59).

Absolute estimate 5: Low quality due to a lack of documentation, mainly on applied method (CLANDESTINO Germany Report: 59).

Absolute estimate 6: Low quality maximum estimate as number of persons cared for at home is a very weak empirical foundation, even as minimum indicator (persons in need of 24-hour care might create labour demand for as many as three persons) (CLANDESTINO Germany Report: 59).

Absolute estimate 7: Careful maximum estimate; assessed as maximum estimate as labour inspection focuses on companies with a likelihood of irregular work (CLANDESTINO Germany Report: 54).

Absolute estimates 8: Careful maximum estimate; assessed as maximum estimate as labour inspection focuses on companies with a likelihood of irregular work (CLANDESTINO Germany Report: 54).

Other subgroups: [back to table](#)

Sex workers: Careful maximum estimate, based on not fully sufficient data (NGO and health expert assessments of number of prostitutes) (CLANDESTINO Germany Report: 61).

Comments on the table are welcomed by the Database team: [Dita Vogel](#) and [Vesela Kovacheva](#).

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