

What One Needs for Successful Adaptive Survey Designs

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DESAN Research Solutions

- Amsterdam, The Netherlands, 1986
- large-scale socio-economic surveys
- data collection, processing, digital reporting
- survey software
- survey modes
 - postal
 - face-to-face
 - phone
 - web
 - secondary data collection from registers, databases etc.

Choosing modes

- Four main survey modes
 - postal
 - face-to-face
 - phone
 - web
- Single or multi-mode?
- Concurrent or sequential or mixed mixed?
- Which mode(s) for whom?
- Differentiated (ASD) or same for all?
- Choice for respondent?
- Quality, costs, practicalities
- What is needed to optimise the survey design?

Mode checklist

- survey subject
 - sensitivity
 - audiovisuals?
 - questionnaire length
- availability of contact details
 - address, phone number, @ddress
- survey population characteristics
 - age, ethnicity, education etc.
- general response experiences and trends
- response details from previous flows

Response in general

- *If* contact details are known and correct...

	response	costs	speed	multilingual
<i>face-to-face</i>	++	--	-	-
telephone	+	-	+	+
paper	-	+	--	--
web	--	++	++	++

- ... but phone numbers and e-mail @addresses are often unknown or incorrect
 - public telephone register coverage decreases steadily
 - varies highly by age, ethnicity and gender

A case

- Survey on sport and exercise in The Hague
- Good example of what is needed for successful Adaptive Survey Design

The Hague Sport Survey

- population of The Hague, age 4-70 (4-11 par)
- subject: sports and other exercise + opinion
- targets:
 - 4500 respondents
 - 8 districts, 8 age groups, 3 ethnic groups
 - special targets for immigrant youngsters, certain districts
- sampling frame: population register
- letter from dep. mayor to all citizens sampled
- fieldwork January – March 2010

Population characteristics

- population details known from the register:
 - sex
 - age
 - ethnicity
 - district (address)
- contact details: name, address

Response estimation sources

- previous flows of the survey (DESAN, others)
- other recent surveys in The Hague (DESAN)
- other recent surveys in other major cities

in order to estimate

- telephone register coverage rate (TRCR)
- response rates per mode by ethnicity and age

Some overall estimations

- Estimated telephone response 20% - 40%
BUT
- estimated % of found phone numbers varied from 50% among non-immigrant Dutch to 11% (!) among Moroccan Dutch => phone alone is no option
- estimated internet response varied from 3% to 7% => web alone is no option
- estimated postal response varied from 5% to 13% => paper alone is no option

Some overall estimations

- overall internet response: 5%
- overall paper response: 9%
- overall paper+web non-respondents telephone number rate: 33%
- overall paper+web non-respondents telephone response rate: 31%
- overall response: $5\% + 9\% + (33\% * 31\% * (100\% - 5\% - 9\%)) = 23\%$

Some detailed estimations

	Turkish	Moroccan	'Dutch'
Target n	393	283	2100
Response estimates:			
-internet (I)	3%	3%	6%
-paper (P)	6%	5%	13%
<i>I+P non-response</i>	<i>91%</i>	<i>92%</i>	<i>81%</i>
<i>phone number rate</i>	<i>19%</i>	<i>11%</i>	<i>50%</i>
<i>phone response rate</i>	<i>30%</i>	<i>20%</i>	<i>40%</i>
-telephone (T)	5%	2%	16%
TOTAL (S+I+T)	14%	10%	35%
Sample needed	2770	2822	5966

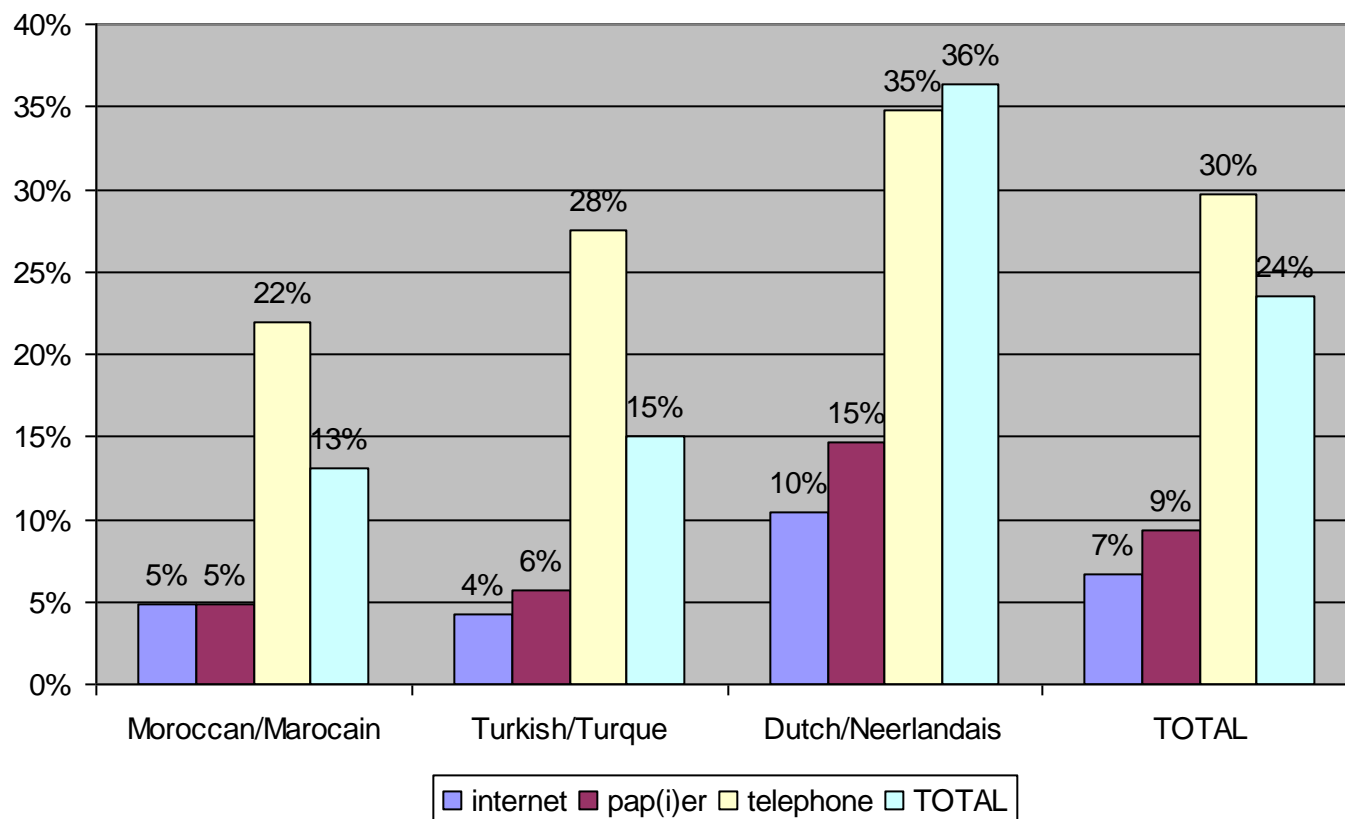
The Hague design

- paper + web to all
 - concurrent
- telephone among non-respondents
 - sequential
- oversampling based on response rate and phone number estimates by ethnic group
- (oversampling in certain ages, areas, ethnicities)
- paper in Dutch, web and telephone scripts also in English and Turkish

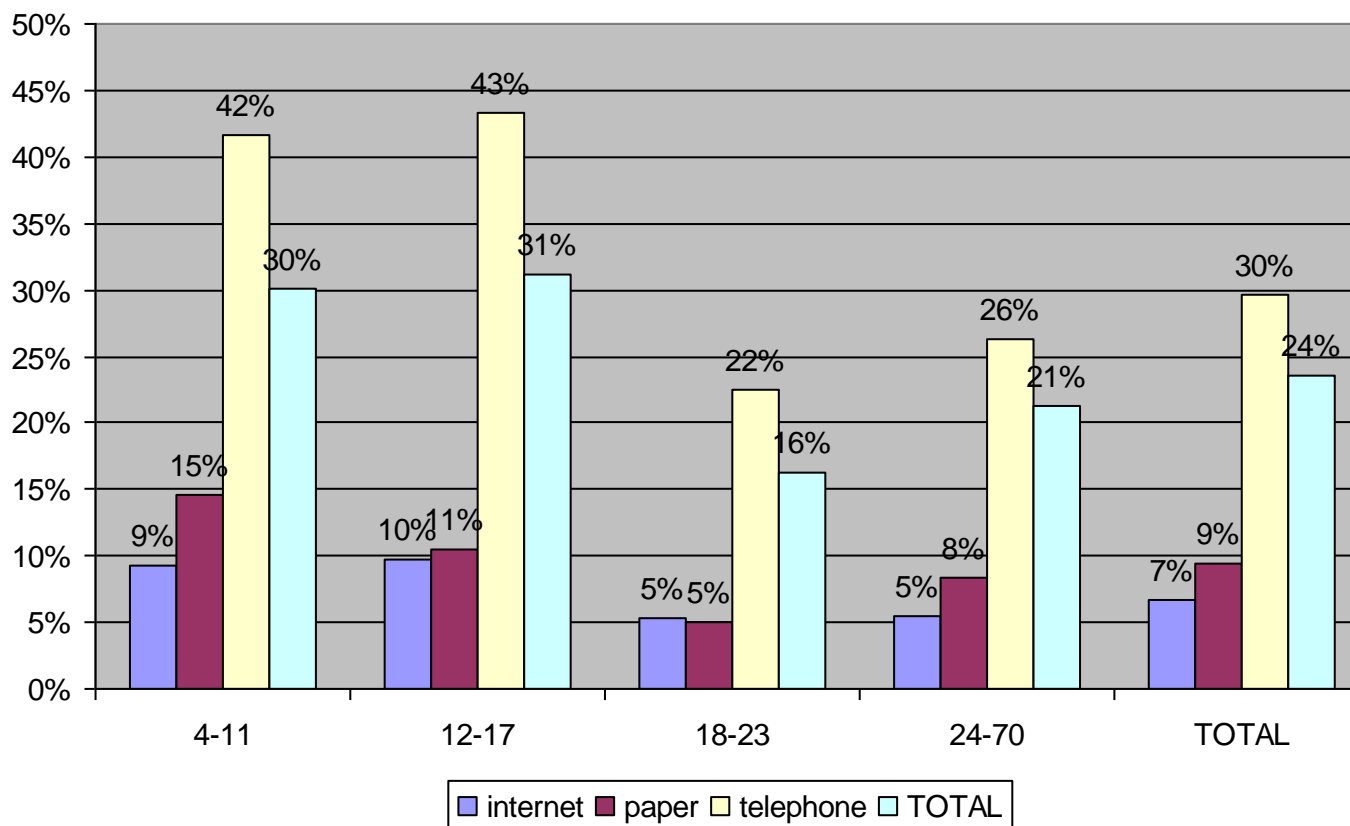
The Hague results

- 4501 respondents (!)
- total, ethnicities, districts targets reached
- underperformance age 18-23
 - many young adults who left home
 - incorrect addresses
 - unknown phone numbers
 - low response rates

Response by ethnic group



Response by age



If blinded...

...and only Moroccan and 'Dutch'

	Moroccan	Dutch	TOTAL
population	500	4500	5000
share in population	10%	90%	100%
phone numbers found	14%	49%	46%
telephone response rate	22%	35%	35%
total response rate	3%	17%	16%
total response n	15	772	787
share in net sample (response)	2%	98%	100%

The Hague conclusion

- Combining administrative data with general and specific estimations on contact data and response rates yielded (probably) optimal modes mix, efficient sample.
- Same design next time? Perhaps not. All estimations will have changed.

Finally

Good example of what is needed for ASD:

- population details
- data to estimate
 - telephone register coverage rate
 - response rate

=> detailed meta/paradata from comparable previous surveys are crucial

Bad example of ASD:

- It was no ASD: differentiated oversampling, but same mode approach for all groups