

# Preferences of Elderly People for Housing and Long-Term Care

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# Outline

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- Motivation
- Background
  - LTC and wealth
- SP methodology
- Data collection and results
- Conclusions

# Research project

- “Home equity and the demand for and cost of long term care”  
NETSPAR small vision grant
    - LTC use & costs among elderly people (55+)
    - Financial and housing wealth of elderly people
- Is there a market for new LTC products in place that can be financed using individual wealth?

# Motivation (1)

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- Health care costs show a tremendous increase relative to GDP growth
  - c.a. 12% of GDP in the Netherlands, 2012
- High proportion of health costs are due to LTC costs in NL
  - twice the OECD average at 3.7% of GDP
  - broad coverage of LTC
  - relatively low co-payments
- Further rise in LTC costs among the elderly due to ageing
  - 65+ make now 16% of population, to rise up to 26% in 2040
  - increasing share of very old cohort
- Inability to sustain persistently rising LTC costs by governments in the long term



# Motivation (2)

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- Elderly people seem to be myopic in their housing & care decisions
  - Often, these are forced choices when care is needed
  - Few alternatives to choose from
- Important to know preferences of the elderly w.r.t. housing & care in order to steer the market to a win-win situation
  - Better choices by the elderly if made on time
  - Lower public costs of LTC
- Taste heterogeneity expected
  - Demographic, health and housing variables

# Context

- Changing institutional context of health care provision in NL
  - Changing legislation (WMO + WLZ will replace AWBZ as of 2015)
  - Changing actors / roles in health care giving
    - Formal and informal caregiving
    - Insurers, municipalities and central government
- Envisaged consequences:
  - Increasing co-payments for LTC (based on household wealth)
  - Increasing share of non-institutional care
- Important aspects of this policy change:
  - Preference of elderly people to age in place
  - Separation of housing and care in LTC provision
  - Increasing out-of-pocket contributions to LTC

**Background:**  
**LTC & wealth analysis**

# Initial analysis

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## **Micro-data available from CBS**

- the Dutch Housing Survey (WoON 2009)
  - Dutch households aged 55+ plus
  - housing characteristics and health (ADL/HDL indicators)
- Administrative data from municipalities (2009)
  - Demographics
- Central Adm. Office (CAK) and Care Assessment Centre (CIZ)
  - the long-term care use and amount (2009-2012)
- **CBS data (2009)**
  - Income & wealth accounts

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N c.a. 29,000

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# Results

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- Particularly high average LTC costs are found among individuals without residual (financial) wealth as well as without home equity (renters).
- This is due to
  - High prevalence rate (LTC use)
  - High average expenditure per LTC user
- Mean LTC costs decrease as household wealth increases
- No clear-cut pattern between mean LTC costs and the amount of home equity
- Controlling for demographic and health characteristics the effect of financial & housing wealth remains negative for the institutional care use and expenditure



# **Eliciting preferences for housing and care**



# Method: stated preferences

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- Stated preference (SP) method:
  - Choices / behavior are not observed but are asked for
  - Choices are asked to be made in a specified **situation**, about a specified **good**
  - **A choice task** consists of
    - A number of options (*alternatives*)
    - Described by a number of characteristics (*attributes*)
  - Realistic, relevant, clear

# Concept of choice task

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- Private arrangement of LTC and housing as alternative to public provision
- Realistic business case
- Rent alternatives

# Context of our choice task

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- The need for LTC may occur due to a chronic disease, deteriorating health condition or an accident
- Out-of-pocket payments are required when public care is used

# Our choice task

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- Newly developed property for rent in the vicinity of current dwelling
- Rent apartments with or without a possibility of private care (LTC)
- No co-payments required when private care is used
- Choice to be made between a current dwelling and two hypothetical rent apartments
- Home owners were asked additionally whether they would be interested to consider such choice

## Rent and care experiment: top segment; private care possibility

	Rent appt 1	Rent appt. 2	Your current dwelling
	(rent only)	(rent and care)	
Size apartment	100 m <sup>2</sup>	80 m <sup>2</sup>	
Number of rooms	A living room and 2 bedrooms	A living room and 1 bedroom	
Possibility of private care	No	Yes (only light care)	
Monthly costs	€ 650	€ 800	
Out-of-pocket payment (to be paid for each incident of care use)	€ 450	---	
Number of similar apartments available	10	2	
<b>YOUR CHOICE</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Data collection: private panels

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- Pilot (Nov 2015)
  - 15 in-depth interviews
  - Fine-tuning questionnaire
- **Bouwinvest & DirectResearch**
  - Period: 4 – 11 maart 2016
  - Net N = 300
- **PGGM & Arachnea**
  - Period: 18 dec 2015 – 8 jan 2016
  - Net N = 413



## Sample screenshot questionnaire



**Bouwinvest**

Huurderspanel

Vragenlijst



Stelt u zich voor dat u een folder aangereikt krijgt met informatie over een nieuwbouwproject bij u in de buurt. Het nieuwbouwproject bestaat uit gelijkvloerswoningen die u kunt huren, met een mogelijkheid particuliere zorg te krijgen. De kosten van zulke woningen bestaan uit huur en een toeslag voor zorg (een vast bedrag per maand). In dit geval hoeft u geen eigen bijdrage te betalen bij het gebruik van zorg. Verder kunt u alle zorg thuis ontvangen en u hoeft dus niet naar een instelling te verhuizen als u meer zorg nodig heeft.

Stelt u zich voor dat u nu een keuze van een woning zou maken. Welke woning zou u kiezen?

Klik op de optie die uw voorkeur heeft.

	Huurwoning 1 (alleen wonen)	Huurwoning 2 (wonen met particuliere zorg)	Uw huidige woning, uw huidige situatie
Oppervlakte	100 m <sup>2</sup>	80 m <sup>2</sup>	
Aantal kamers	3	2	
Mogelijkheid tot particuliere zorg	Nee	Ja (alleen lichte zorg)	
Kosten woning (maandelijks, in euro's)	€ 650 (huur)	€ 800 (huur en zorg)	
Eigen bijdrage publieke zorg (maandelijks) <i>te betalen alleen bij zorggebruik</i>	€ 250	—	
Aantal woningen beschikbaar	10	2	

Wij willen aan u 6 keer een keuze van woningen voorleggen met telkens verschillende waarden van kenmerken van huurwoningen.

Volgende 

## Sample statistics

	Mean (std.dev.)
Men	59,47%
Age	67,72 (5,34)
60-64	27,63%
65-69	42,22%
70 and above	30,15%
College education	54,42%
One-person household	29,17%
High income	5,33%
Income unknown	9,82%
Home owner	40,67%
Renter (free market)	42,08%
Renter (subsidised market)	17,35%

# Estimated model

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- Type model: latent class
  - Pooled data: PGGM (N=413) & Bouwinvest (N=300)
  - Taste heterogeneity
    - Observed & unobserved
  - 4 classes of respondents with different preference patterns estimated
- Results are presented in terms of WTP for a specific attribute

## Estimation results: a latent class model

	CLASS 1			CLASS 2			CLASS 3			CLASS 4		
	“Stay put” / Reference			“Certainty seekers”			“Comfort seekers”			“All-in-one”		
	Coeff.	Std.err.		Coeff.	Std.err.		Coeff.	Std.err.		Coeff.	Std.err.	
<b>CLASS MEMBERSHIP MODEL</b>												
Class const.				-0,749	0,275	**	-0,441	0,249	*	-0,882	0,339	**
Rent (free market)				0,762	0,315	**	1,410	0,290	***	0,951	0,353	**
Rent (subsidised market)				-0,568	0,790	..	-0,190	0,437	..	0,631	0,371	*
Age 70 and above				-0,453	0,311	..	-0,578	0,270	**	-0,039	0,269	..
College education				0,044	0,291	..	0,526	0,252	**	0,590	0,264	**
High income				-0,565	0,580	..	-0,479	0,499	..	-2,120	1,070	*
No income info				-9,370	49,900	..	-0,109	0,378	..	0,145	0,379	..
<b>CHOICE MODEL</b>												
ASC rental appt	-1,250	0,910	..	5,020	1,340	***	5,860	0,836	***	2,710	0,875	***
ASC rental appt w/care	-1,870	1,290	..	5,330	1,670	***	4,860	1,190	***	5,050	1,000	***
rent (x100euro)	-0,307	0,135	**	-0,410	0,114	***	-0,520	0,096	***	-0,731	0,113	***
m2 (x100m2)	0,291	0,282	..	-0,652	0,673	..	0,653	0,284	**	0,624	0,341	*
Number of rooms	0,525	0,098	***	0,425	0,159	**	0,697	0,082	***	0,733	0,102	***
Co-payments LTC (x100euro)	-0,171	0,239	..	-0,491	0,225	**	-0,268	0,151	*	-0,329	0,158	**
Proxy appt choice	0,007	0,027	..	-0,005	0,026	..	0,018	0,018	..	0,056	0,024	**
Light & heavy care	0,692	0,388	*	1,040	0,320	***	-0,033	0,243	..	0,829	0,203	***
Current housing costs (x100euro)	-0,012	0,040	..	-0,028	0,113	..	0,025	0,042	..	-0,028	0,053	..
Estimated sample %	53,00%			11,42%			17,15%			18,44%		
<b>Estimation statistics</b>												
Number of estimated parameters:	57											
Sample size:	4.278											
Init log-likelihood:	-											
Final log-likelihood:	4.699,863											
	-2.572,566											

## Estimation results: a latent class model

	CLASS 1			CLASS 2			CLASS 3			CLASS 4		
	“Stay put” / Reference			“Certainty seekers”			“Comfort seekers”			“All-in-one”		
	Coeff.	Std.err.		Coeff.	Std.err.		Coeff.	Std.err.		Coeff.	Std.err.	
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High income				-0,565	0,580	..	-0,479	0,499	..	-2,120	1,070	*
No income info				-9,370	49,900	..	-0,109	0,378	..	0,145	0,379	..
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rent (x100euro)	-0,307	0,135	**	-0,410	0,114	***	-0,520	0,096	***	-0,731	0,113	***
m2 (x100m2)	0,291	0,282	..	-0,652	0,673	..	0,653	0,284	**	0,624	0,341	*
Number of rooms	0,525	0,098	***	0,425	0,159	**	0,697	0,082	***	0,733	0,102	***
Co-payments LTC (x100euro)	-0,171	0,239	..	-0,491	0,225	**	-0,268	0,151	*	-0,329	0,158	**
Proxy appt choice	0,007	0,027	..	-0,005	0,026	..	0,018	0,018	..	0,056	0,024	**
Light & heavy care	0,692	0,388	*	1,040	0,320	***	-0,033	0,243	..	0,829	0,203	***
Current housing costs (x100euro)	-0,012	0,040	..	-0,028	0,113	..	0,025	0,042	..	-0,028	0,053	..
<b>WTP estimates</b>												
A1: rental appt	-€ 407,17	..		€ 1.224,39	***		€ 1.126,92	***		€ 370,73	***	
A2: rental appt w/care	-€ 609,12	..		€ 1.300,00	***		€ 934,62	***		€ 690,83	***	
<b>WTP (10xm2)</b>	€ 9,48	..		-€ 15,90	..		€ 12,56	**		€ 8,54	*	
<b>WTP (room)</b>	€ 171,01	***		€ 103,66	**		€ 134,04	***		€ 100,27	***	
<b>WTP (private care)</b>	€ 225,41	*		€ 253,66	***		-€ 6,35	..		€ 113,41	***	
<b>WTP (appt choice)</b>	€ 2,43	..		-€ 1,17	..		€ 3,37	..		€ 7,70	**	
<b>Estimated sample %</b>	50,00%			11,40%			17,15%			19,44%		

# Tastes differ (1)

## Class 1 (53,0%): STAY PUT

PGGM panel / home owners

Older age (70+)

High income

Lower education

Strong preference for own dwelling

Extra room (170€ p.m.)

Heavy care (225€ p.m.) \*

## Class 2 (11,4%): CERTAINTY SEEKERS

Renters (free market)

Preference for a rental apartment  
with and without care

Extra room (104€ p.m.)

Heavy care (254€ p.m.)

## Tastes differ (2)

Class 3 (17,2%):

### COMFORT SEEKERS

Renters (free market)

Age 60-70

College education

Preference for a rental apartment with  
and without care

Extra space (13€ p.m. / 10m<sup>2</sup>)

Extra room(134€ p.m.)

Class 4 (18,4%):

### ALL-IN-ONE

Renters (free market)

Renters (subsidized market)

College education

No high income (2x modal)

Preference for a rental apartment with  
and without care

Extra space (8,5€ p.m. / 10m<sup>2</sup>) \*

Extra room (100€ p.m.)

Heavy care (113€ p.m.)

Appt choice (7,7€ p.m.)

# Summary and conclusions



# General conclusion

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- Pooled data from 2 private panels
- Target group 60+
- SP method applied (choice tasks)
  
- Little interest for rental apartments among home owners (c.a. 1/8)
- Some interest for rental apartments with private care option (c.a. 1/3)
- Tastes differ



# Conclusion housing and care (1)

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- Main requirement of (potential) elderly renters
  - Living space (both m<sup>2</sup> and number of rooms)
  - 2 groups: “comfort seekers” and “certainty seekers”
- Ageing trap: postponing moving to a ageing-proof dwelling unless care is needed
  - Reactive vs proactive behaviour
- Solution:
  - Information (use & costs of LTC)
  - Presence of relevant dwelling supply

# Conclusion housing and care(2)

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- Preferences towards housing with care option:
  - Mainly by current renters
  - 2 groups (total ca.30%)
  - Requirement of living space
  - Differences in WTP's
- Omitted characteristics:
  - Type of household
  - Type of dwelling
  - Own estimated probability of using LTC in the coming 10 years
  - Own reported health score

# Wrapping up

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- **Future research agenda:**

- (1) Appropriate instruments / arrangements to finance LTC
- (2) Product development for housing & care
- (3) Preference dynamics (younger vs older generation)

**Thank you!**