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Mandatory superannuation and self-sufficiency in retirement

An application of the APPSIM dynamic
microsimulation model

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APPSIM

- NATSEM is developing a dynamic microsimulation model, the Australian Population and Policy Simulation Model (APPSIM)
- Provides a snapshot of the characteristics of the population and government programs as at 30 June each year
- Base data is Australian 2001 Census one per cent sample file (188,000 people)
- Full population model, with individuals being aged to about 2050; discrete yearly time unit
- Panel data used to estimate transition probabilities

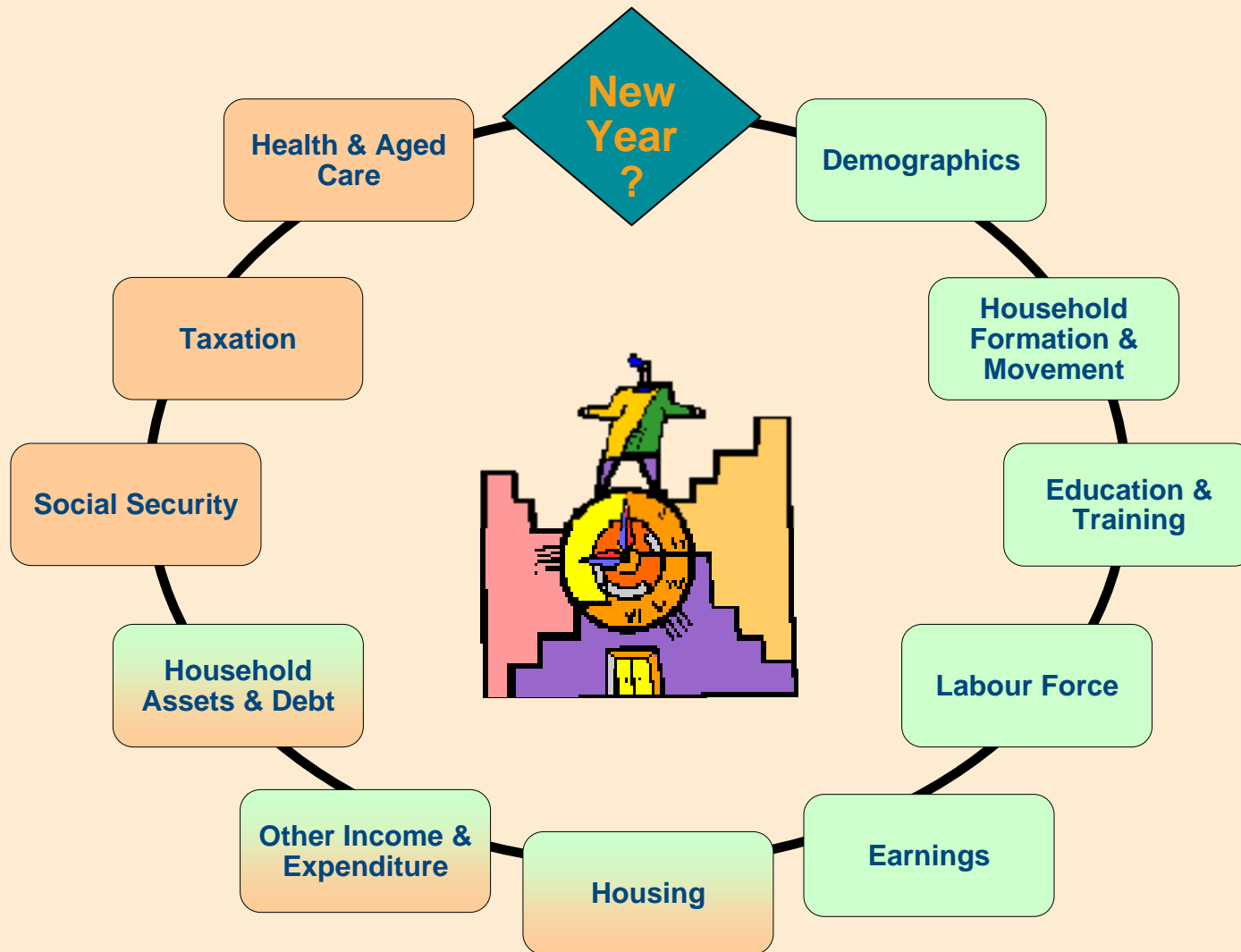
APPSIM

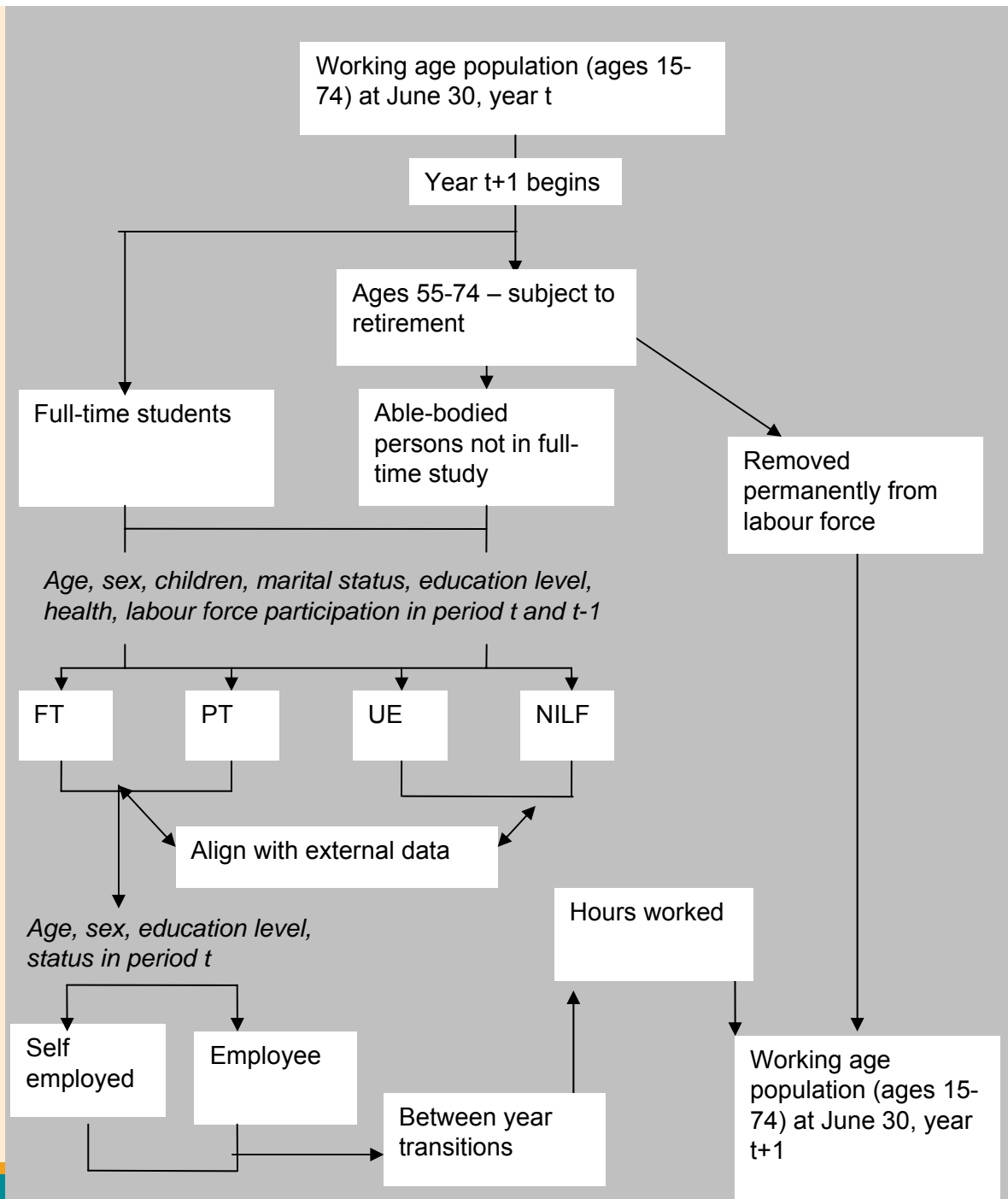
- 5 year project, started in late 2005
- First prototype due Dec 2009
- Funded by the Australian Research Council (grant LP0562493) and 12 Commonwealth Government agencies



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APPSIM





APPSIM's role in estimating future pension burdens

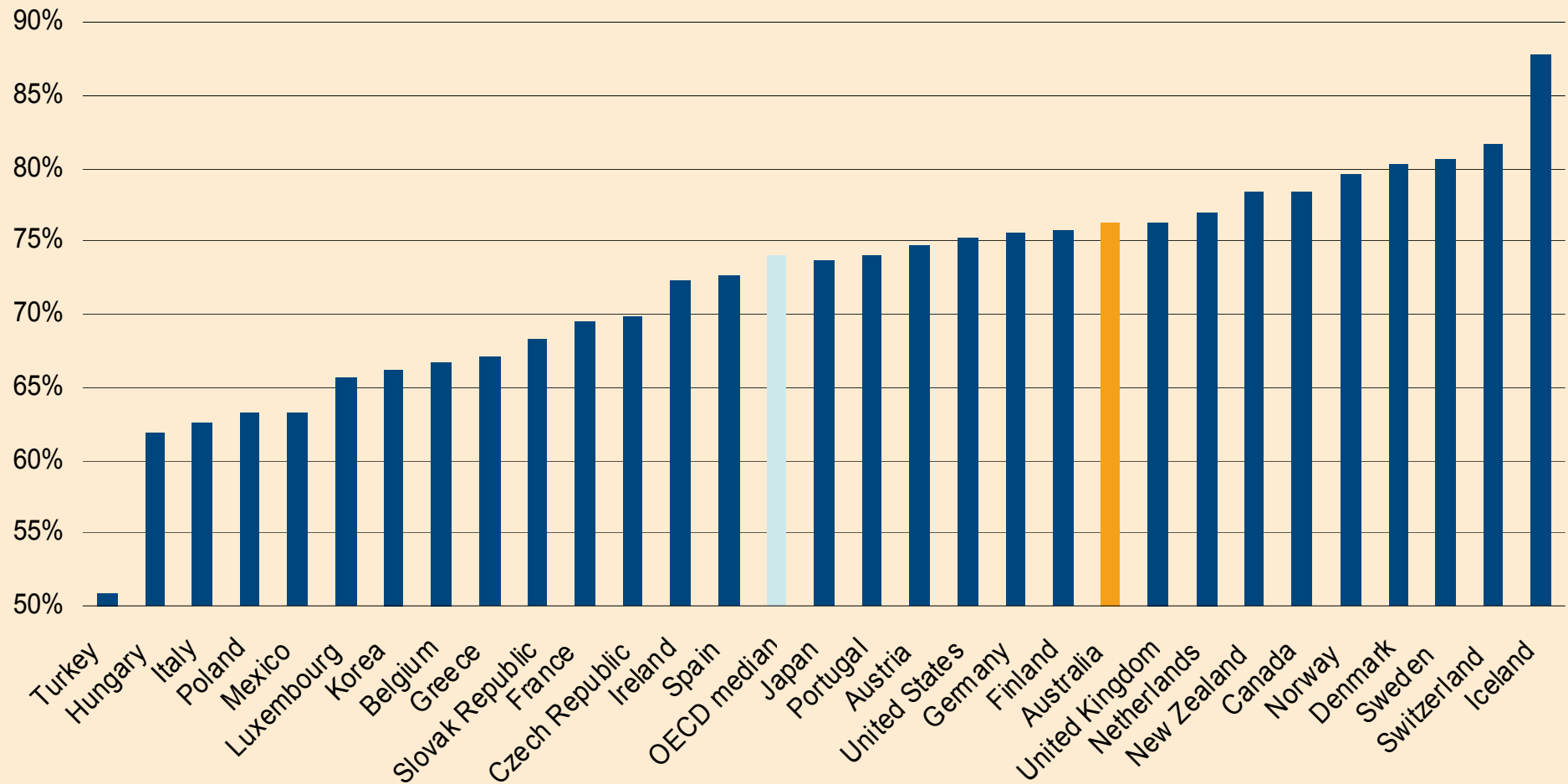
- One way to reduce future pension burdens is to increase super accumulation: more super means age pension entitlements are reduced
- Can be done by increasing labour force participation or increasing the superannuation contribution rate
- Dynamic microsimulation is the best way to assess the effectiveness of such policies as *who* accumulates more super is more important than *how much more* is accumulated

Four policies to be assessed

- Three relate to increasing labour force participation
 - Increasing total labour force participation
 - Reducing disability among 45-64s
 - Increasing labour force participation rates among mothers of pre-school age children
- One relates to superannuation accumulation
 - Increasing the mandatory contribution rate to 12 percent from 9 percent
- These policies will be compared to a baseline scenario
- The year assessed will be 2043

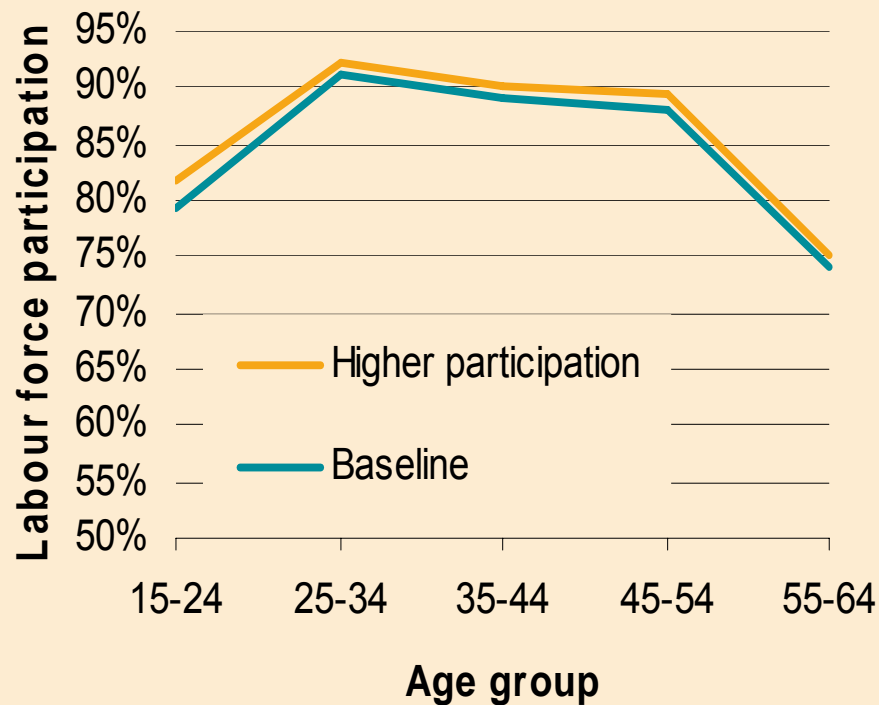
Increasing overall labour force participation

Labour force participation in 15-64 age group in OECD countries, 2007

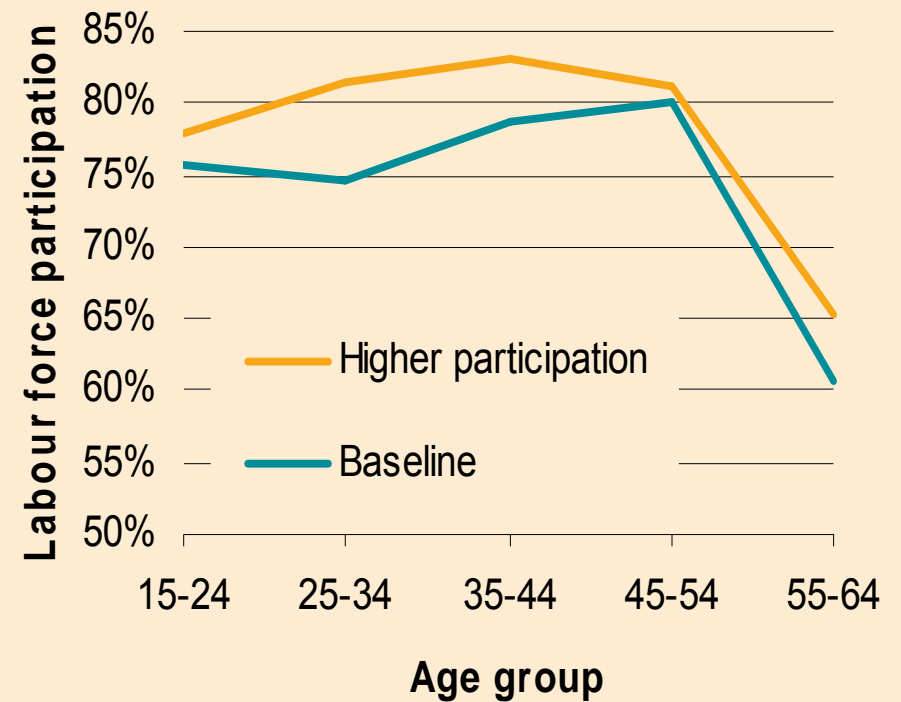


Increasing overall labour force participation

Males

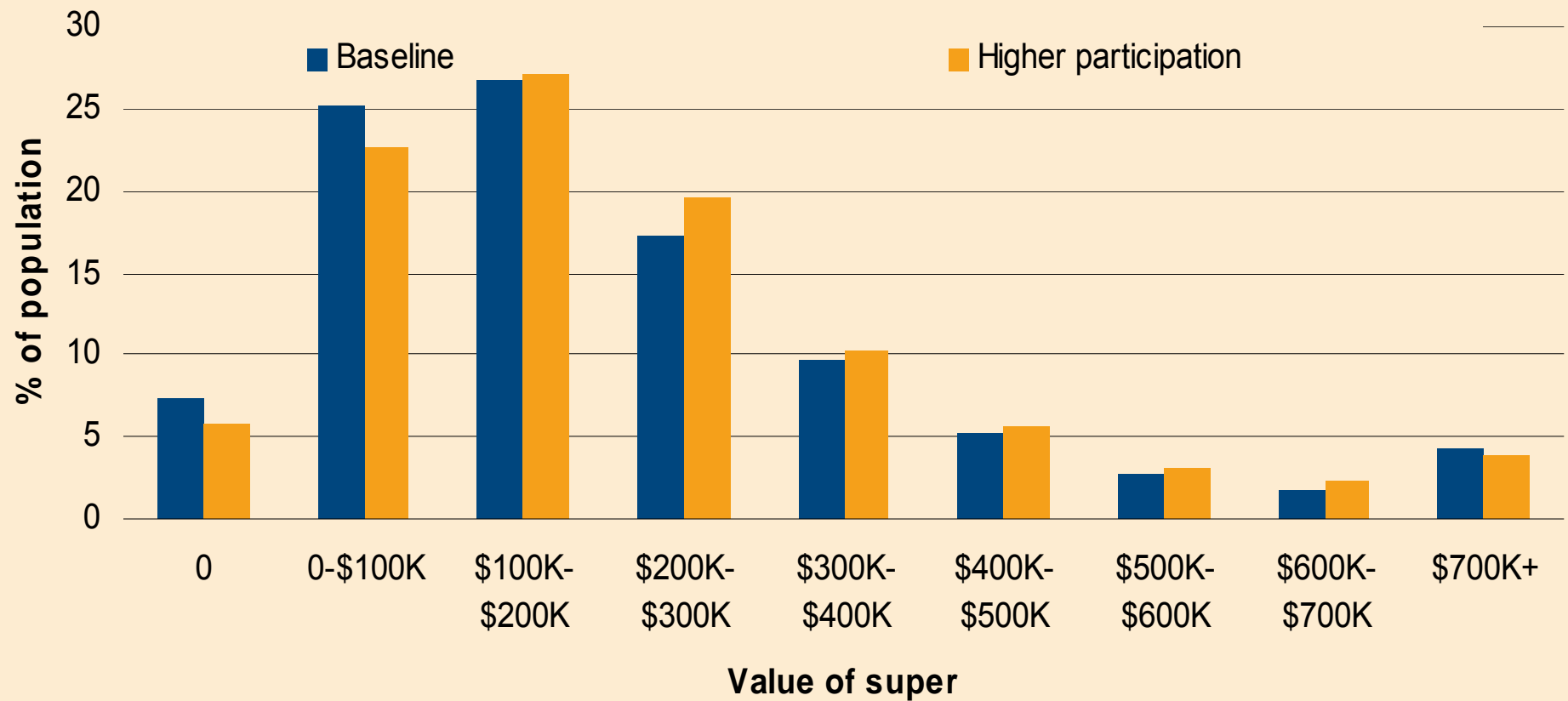


Females



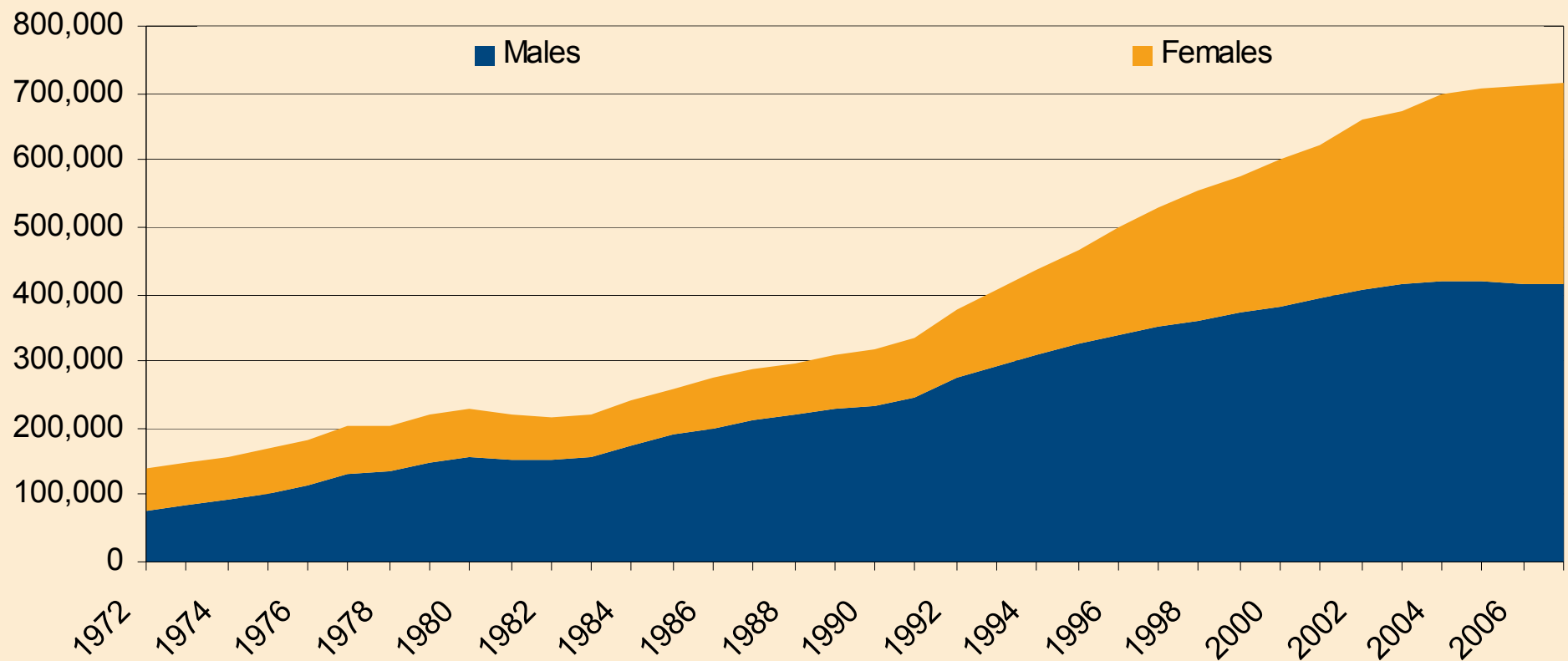
Increasing overall labour force participation

Age 55-64, 2043

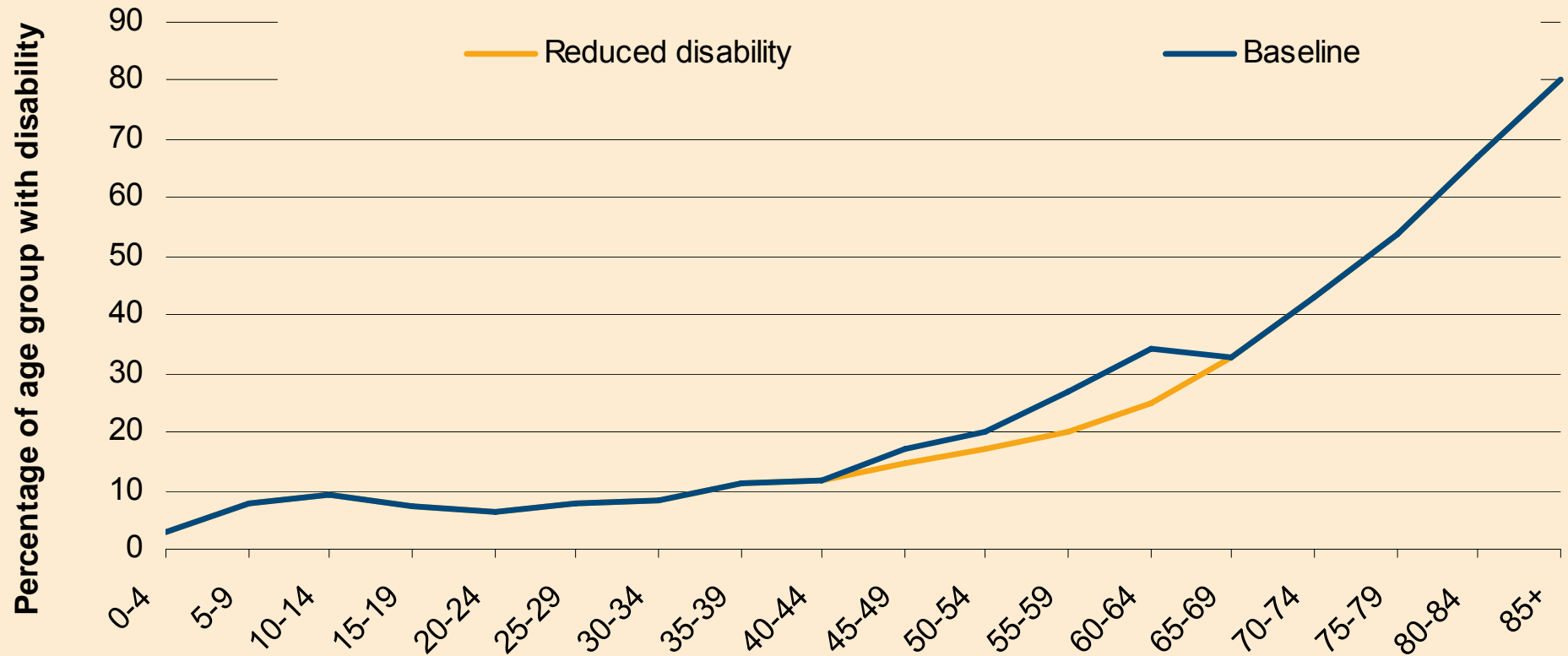


Reducing disability among 45-64s

Disability Support Pension recipients, 1972-2007

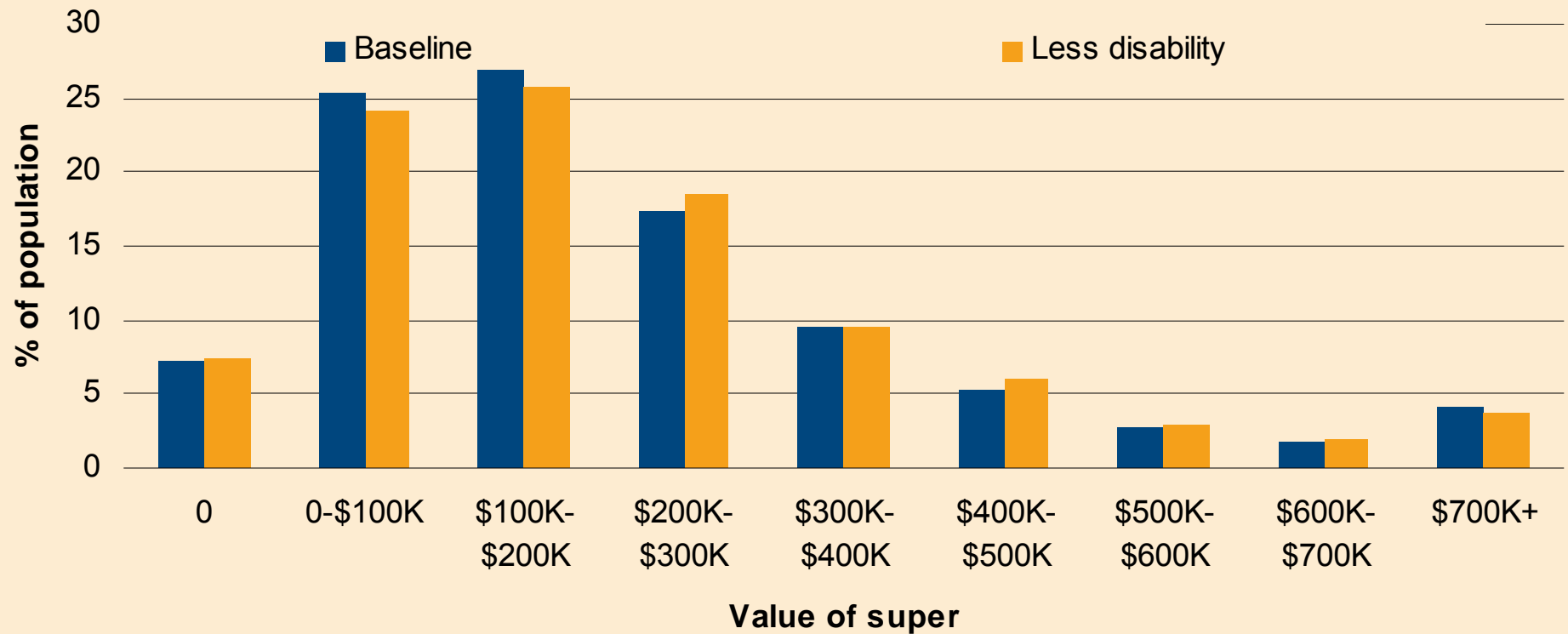


Reducing disability among 45-64s



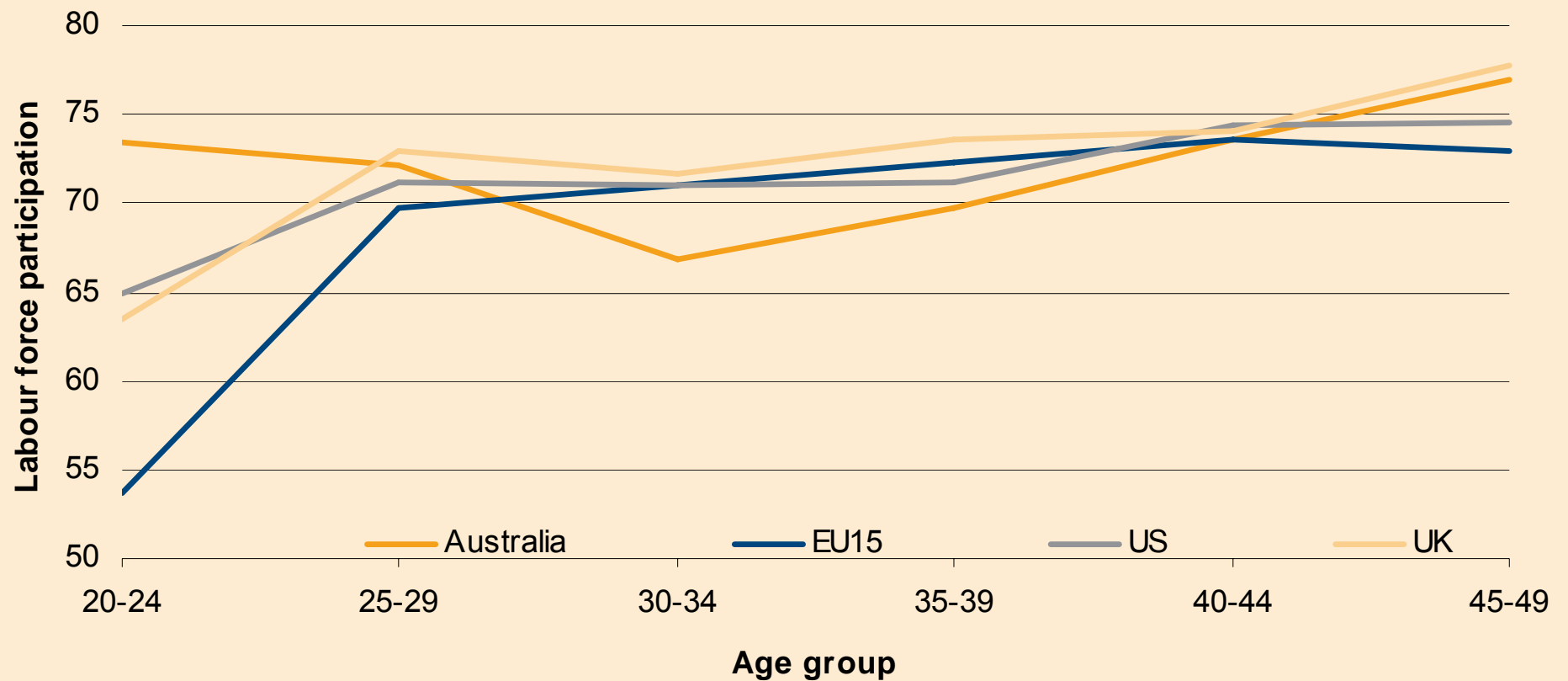
Reducing disability among over-45s

Age 55-64, 2043



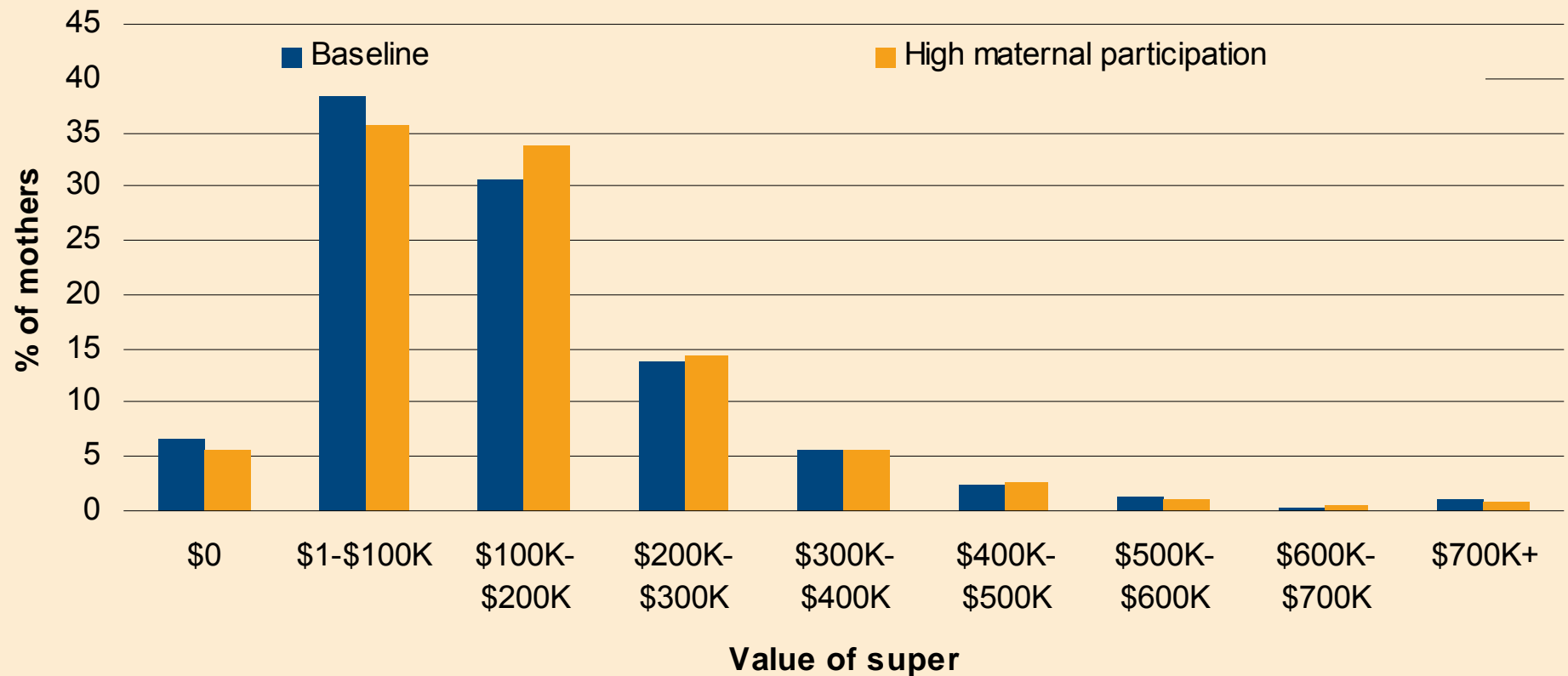
Increasing participation of mothers

Labour force participation of females by age group, 2047



Increasing participation of mothers

Women aged 55-64, 2043

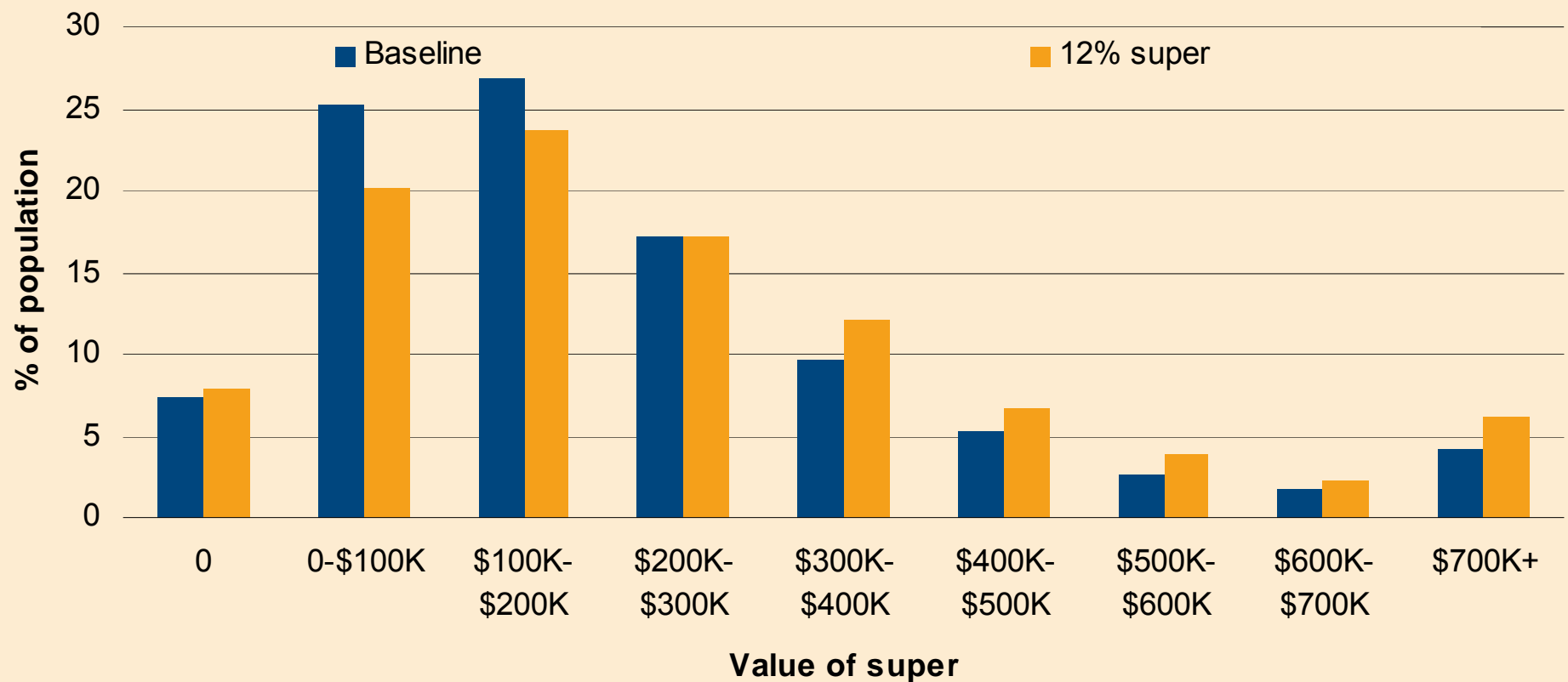


Increasing the Superannuation Guarantee to 12 percent

- The original plan for compulsory superannuation was for contributions to reach 15%: 9% from employers, 3% from employees and 3% from government
- Currently the nine percent compulsory superannuation contribution comes entirely from employers
- Raising the compulsory rate of contributions is frequently discussed as a means to improve self-sufficiency in retirement and reduce future pension burdens
- This scenario implicitly assumes that the increase comes from employers or government, as no reduction in earnings is simulated

Increasing the Superannuation Guarantee to 12 percent

Age 55-64, 2043



Findings

Super balances at 55-64 under five scenarios, 2043

	Mean \$ 000	25 th percentile \$ 000	Median \$ 000	75 th percentile \$ 000
Baseline	260	72	160	287
Increased overall participation	273	88	179	300
Lower disability	254	76	167	294
Higher participation for mothers	267	73	167	294
Super Guarantee 12%	316	86	193	344

Findings

Recipients of age pension aged 65-74 under five scenarios, 2043

	No age pension %	Part pension %	Full age pension %
Baseline	20	46	34
Increased overall participation	22	48	30
Lower disability	21	46	33
Higher participation for mothers	20	47	33
Super Guarantee 12%	21	49	30

Conclusions

- Policies to reduce pension dependence need necessarily not target the whole population, targeting traditionally low-wealth groups is also effective
- Must take into account costs of adopting each plan:
 - Increasing the super guarantee will divert funds from profits, earnings or government revenue
 - Increasing labour force participation may require specific incentives or programs which can have their own costs
- Illustrates long term as well as short term impacts of increasing labour force participation



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