THE DECISION TO RETIRE EARLY: EVIDENCE FROM PRIVATE SERVICE SECTOR IN THAILAND
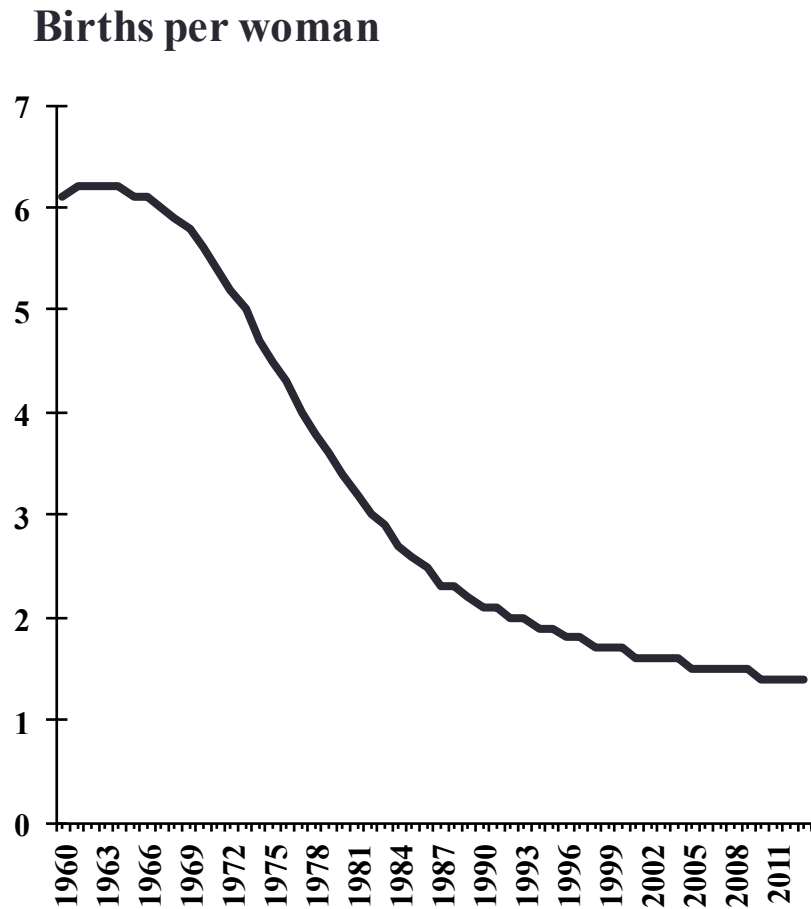
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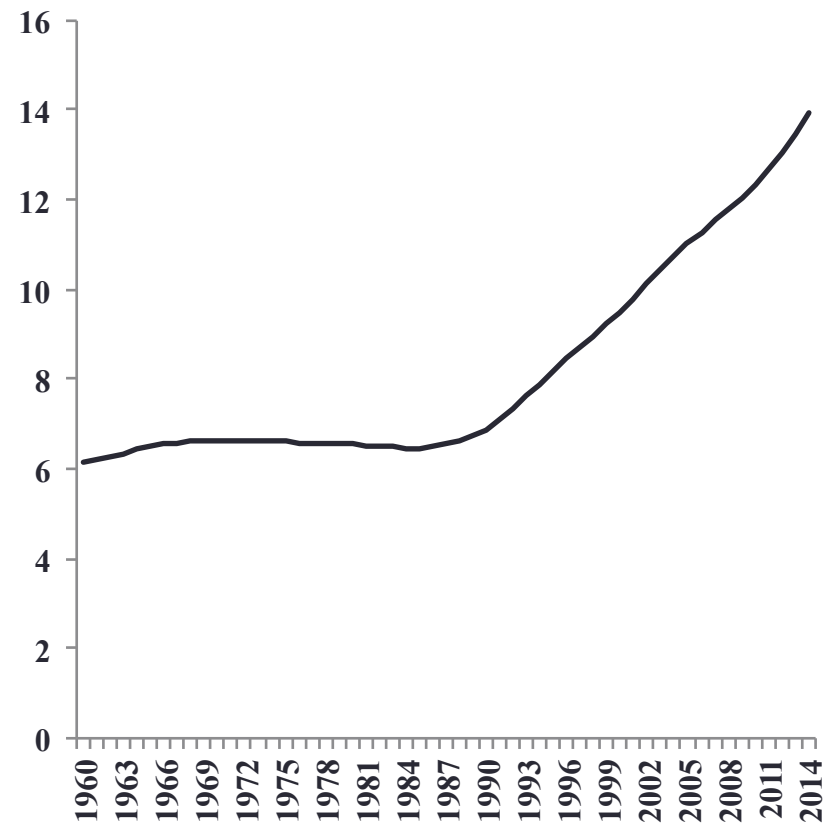
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Total fertility rate, Thailand

Births per woman

Age-dependency ratio, old (% or working-age population), Thailand

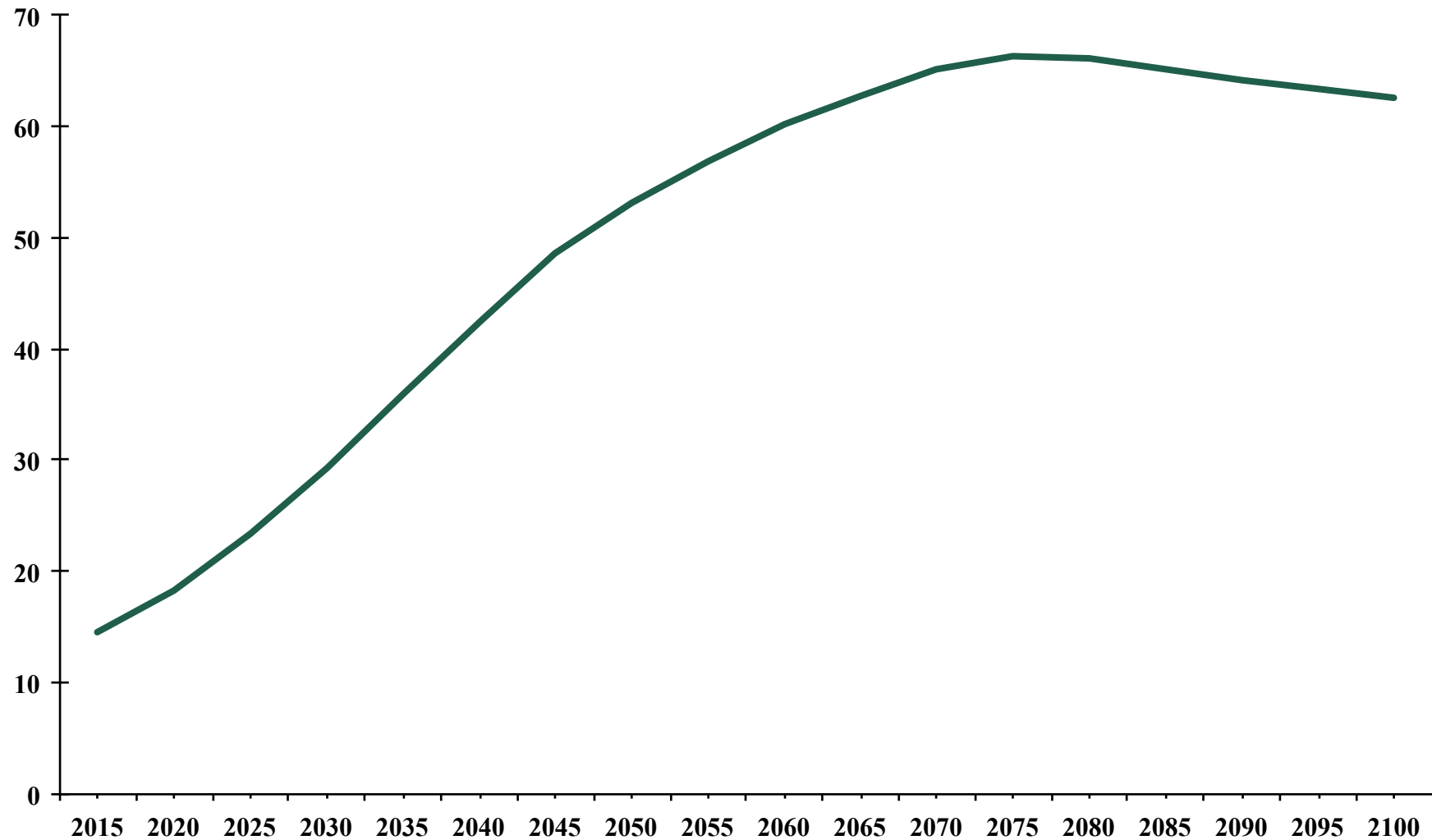**Per 100 population 15-64**

Forecast on old-age dependency ratio, Thailand

Per 100 population 15-64

- Soonthornchawakan and Cintakulchai (2009)
  - investigated types of industries in the private sectors that aged workers should be working based on worker productivity using Socio-Economic Survey data.
  - Their analysis recommends wholesale, retail, hotel and restaurant industries for work retirement extension

- Soonthornchawakan and Kulthanavit (2013)
  - examine aged worker productivity in manufacturing, wholesale, retail, hotel and restaurant industries using Socio-Economic Survey data.
  - They found that aged worker productivity between 55 to 59 years old declined significantly in the manufacturing industry because of health issues. While aged worker productivity in wholesale, retail, hotel and restaurant industries reach maximum between 55 to 59 years old.

Background on retirement policy in Thailand

Age of retirement and Age to receive pension in the Thai employment sector

Employment sector	Formal worker		Informal worker
	Public Sector	**Private sector**	
Age of retirement	60 years old	No specific legal Depend on the agreement between employees and employer	No specific legal
Age eligibility to receive pension or Age eligibility to receive senior allowances	From 50-60 years old	From 55 years old (Social Security)	No specific legal None

Source: Chalermpol Chamchan (2008)

Theoretical Framework

- Beehr (1986)'s framework identifies extension of working decision by individual characteristics and working environment. The **individual characteristics** include health condition, economic condition, work related characteristics, non-work related characteristics, and attitude about working and retirement. The **working environment variables** include level of satisfaction toward current work and supportive work atmosphere for aged workers.

- Feldman (1994) and Taylor and Shore (1995) use work and non-work related factors as predictor of retirement decision.

Antolin and Scarpetta (1998) introduce the option value of choice model

$$V_t(r) = E_t\left[\sum_{t=\tau}^{r-1} \delta^{t-\tau} s_t U(Y_t) + \lambda \sum_{t=r}^{\infty} \delta^{t-\tau} U(RB_t(r,Y)) s_\tau \; ; \mathbf{X}\right]$$

when

Y_t is salary from working at time t

$RB_t(r,Y)$ is total income after retirement at time t at age r until passaway

r is age of retirement

s_t is the probability of survival from period t to period t+1

λ is the marginal utility of leisure

δ is the discount factor

$\mathbf{X}$ is the control variables

$E_t[.]$ is the expectation at time t

Therefore, if r^{max} is the retirement age that makes $E_t[V_t(r)]$ the highest, the alternative choice is $O_t(r) = E_t[V_t(r^{max})] - E_t[V_t(r)]$ and individual will only choose to extend his or her retirement if the alternative choice is greater than zero or $O_t(r^{max} > 0)$

Data and Sample

- The primary data is surveyed based on **firms and workers in private service sectors including wholesale, retail, hotel, and restaurant industries with purposive samplings**

- The sample of this study classifies into two groups.
  - The first group is the owner or the manager who can determine aged worker hiring policy in the firm.
  - The second group is represented by **workers aged between 45 – 59 years old of the particular firm in the first group. The workers sample is restricted to workers in the operating level. The number of sampling aged workers at each firm must be at minimum 4 - 9 workers.**

Number of firms and workers classified by sized of firm in private service sectors including wholesale, retail, hotel, and restaurant industries in Thailand in year 2011

Number of workers	Number of firms in wholesale and retail industry	Number of firms in hotel and restaurant industry
1	68,276	113,967
2	38,740	91,544
3-5	36,171	52,569
6-10	9,120	15,995
11-15	2,188	4,833
16-20	930	2,214
21-25	568	1,172
26-30	375	784
31-50	646	1,305
51-100	393	854
101-200	144	368
201-500	44	156
501-1000	6	33
More than 1000	4	6
Total	157,605	285,800

Source: the National Statistical Office in Thailand

Number of formal and informal workers classified by industry, Thailand

Type of industry	Number of formal workers (1000)	Number of workers informal (1000)
Agriculture, Forest, and Fishery	16,329.1	15,490.4
Manufacturing	5,245.6	1,178.5
Construction	2,352.2	1,090.4
Wholesale and retail and repair motor vehicles and motorcycles *	6,079.6 (15.4%)	3,759.4 (15.16%)
Hotel and restaurant*	2,377.9 (6.00%)	1,602.7 (6.46%)
Transportation and Logistic	908.4	479.6
Finance and Insurance	416.8	22.1
Real Estates	126.4	38.1
Government	1,674.8	141.6
Education	1,223.4	109.9
Health and Welfare	668.2	71.0
Others	2,184.6	815.8

Source: the National Statistical Office in Thailand

Number of sampling firms classified by region and industry in year 2011

Region	Number of firms			Number of sampling		
	Wholesale and retail and repair motor vehicles and motorcycles	Hotel and restaurant*	Total	Wholesale and retail and repair motor vehicles and motorcycles	Hotel and restaurant*	Total
Bangkok	17,106	36,754	53,860	5	10	15
Outskirt of Bangkok	12,754	22,345	35,099	4	7	11
Central	30,996	54,293	85,289	9	15	24
Northern	28,585	57,683	86,268	8	16	24
Northeastern	44,362	61,324	105,686	13	17	30
Southern	23,802	53,401	77,203	7	15	22
Total	157,605	285,800	443,405	43	78	121

Number of sample on firms by geographic region

Type of industry	Number of workers	Firms by geographic region						
		Bangkok	Outskirt region of Bangkok	Central	Northern	Northeastern	South	Total
Wholesale and retail and repair motor vehicles and motorcycles	1,801	2 (13.33)	3 (27.27)	7 (20.59)	3 (12.43)	2 (6.67)	6 (31.63)	23 (17.97)
Wholesale excluding motor vehicles and motorcycles	810	1 (6.67)	0 (0.00)	0 (0.00)	4 (16.97)	4 (13.33)	0 (0.00)	9 (7.03)
Retail excluding motor vehicles and motorcycles	1,062	2 (13.33)	1 (9.09)	2 (10.09)	1 (4.55)	7 (23.33)	1 (5.56)	14 (10.94)
Hotel	4,884	6 (40.00)	4 (36.36)	7 (37.40)	15 (56.06)	12 (40.00)	9 (38.04)	53 (41.41)
Restaurant	683	4 (26.67)	3 (27.27)	8 (31.93)	3 (10.00)	5 (16.67)	6 (24.79)	29 (22.66)
Total	9,240	15 (100.00)	11 (100.00)	24 (100.00)	26 (100.00)	30 (100.00)	22 (100.00)	128 (100.00)

Note: Number in the bracket is the percentage of firms by geographic region in each type of industry

Number of samples on workers by provinces

Type of industry	Number of workers by provinces									
	Bangkok	Nakhon Pathom	Kancha naburi	Phetcha buri	Phitsanu lok	Chiang Mai	Ubon Ratchathani	Nakhon Si Thammarat	Songkhla	Total
Wholesale and retail and repair motor vehicles and motorcycles	9 (13.24)	21 (25.30)	0 (0.00)	12 (16.00)	3 (4.76)	8 (16.00)	14 (9.86)	26 (61.90)	4 (7.27)	97 (15.88)
Wholesale except motor vehicles and motorcycles	4 (5.88)	6 (7.23)	0 (0.00)	0 (0.00)	4 (6.35)	18 (36.00)	20 (14.08)	0 (0.00)	0 (0.00)	52 (8.51)
Retail except motor vehicles and motorcycles	14 (20.59)	8 (7.23)	4 (12.12)	12 (16.00)	1 (1.59)	4 (8.00)	28 (19.72)	4 (9.52)	0 (0.00)	75 (12.27)
Hotel	25 (36.76)	26 (31.33)	21 (63.64)	27 (36.00)	43 (68.25)	20 (40.00)	60 (42.25)	8 (19.05)	31 (56.36)	261 (42.72)
Restaurant	16 (23.53)	19 (26.51)	8 (24.24)	24 (32.00)	12 (19.05)	0 (0.00)	20 (14.08)	4 (9.52)	20 (36.36)	126 (20.62)
Total	68 (100.00)	83 (100.00)	33 (100.00)	75 (100.00)	63 (100.00)	50 (100.00)	142 (100.00)	42 (100.00)	55 (100.00)	611 (100.00)

Note: Number in the bracket is the percentage of workers by provinces in each type of industry

Empirical Strategy and Methodology

- The dependent variable for the estimation is **the decision for early retirement.** The dependent variable takes on 1 if worker plan to retire from current work early and 0 otherwise.

- The explanatory variables include **geographic region, gender, marital status, age, education level, type of industry, income, family size, attitude toward workplace, and sources of income after retirement.**

- The logistic regression models to describe factors associated with workers that plan to retire early.

Empirical Results

- First, the results show that workers in the northeastern region have higher propensity to retire early approximately 14.6 percent comparing with workers in the Bangkok and metropolitan area. Workers in the other regions have insignificant effect on the likelihood of planning an early retirement.

- Second, as workers getting older, they have higher probability to retire early.

- Third, Male still have significantly higher propensity to delay their plan to retire early approximately 7 percent compare with women.

- Fourth, the results show that workers who have education attainment at primary education level or below have higher propensity to delay their plan to retire early approximately 12 percent compare to workers who have education attainment in bachelor degree or above.

- Fifth, the results show that workers who have debt have higher propensity to retire early approximately 7 percent.

- Sixth, the results show that individuals with government pension have higher propensity to delay their plan to retire early approximately 15 percent.

- Seventh, the results show that different attitudes toward workplace have insignificant effect on the likelihood of planning an early retirement except attitude toward adaptation of aged worker to new work environment.

Policy Implication and Conclusion

- Many aged workers do not have information about financial planning. As a consequence they cannot maintain an appropriate level of living after retirement. The policy should emphasize on financial literacy knowledge.

- Skill development leads to higher income and productivity. Worker's salary is determined by their productivity. The government may give an incentive for employers to provide skill training to their employees

- Changing an attitude toward aged workers creates sound working environment. The national policy should gear toward work retirement extension or reemployment due to aging society.

Acknowledgement