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Would a Tertiary Education Loan System Work in Indonesia?

- Elza Elmira and Daniel Suryadarma
- 29 April 2019





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Tertiary Education in Indonesia

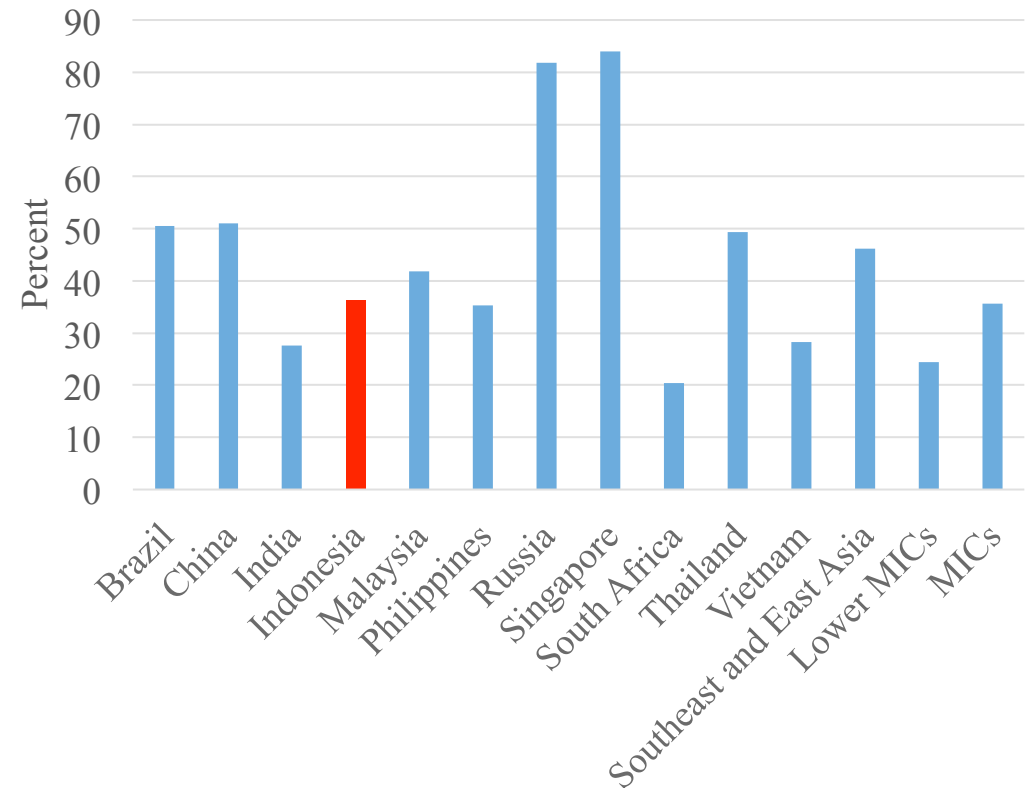




Access to tertiary education has improved, but still limited

- Gross enrolment ratio still relatively low
- GER Gender Parity Index relatively equal
 - 2010: 0.9
 - 2017: 1.1
- Inequitable: among those enrolled in tertiary education, few come from the bottom 40%
 - 2010: 4%; 2018: 13%
 - Worsens income inequality, as tertiary education carries large positive returns

Gross Tertiary Enrollment Ratio, 2016/2017





Tertiary education is predominantly private

- Large private sector presence
 - Institutions: 3,276; 96% private (2017)
 - Enrolled students: 6.9 million; 68% studying in private institutions (2017)
- Large enrollments in social sciences and teacher training

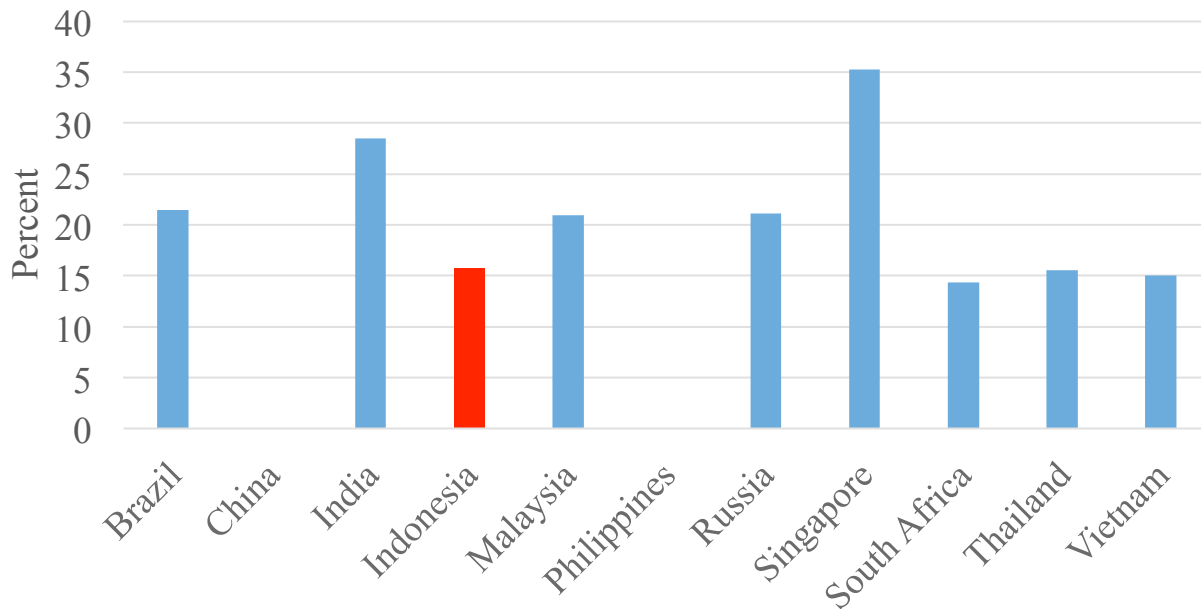
Field of study (broadly defined)	Composition (%)		
	1972–75	2010	2019
a. Natural sciences and technology:			
Natural sciences and mathematics	5.9	7.9	3.1
Engineering	26.7	15.2	17.2
Health sciences	19.9	3.7	8.9
Agricultural sciences	11.8	5.4	5.1
Subtotal	64.3	32.2	34.3
b. Social sciences and education:			
Social sciences	21.9	50.8	43.2
Teacher training (education)	13.8	16.9	22.5
Subtotal	35.7	67.8	65.7
Grand total	100	100	100



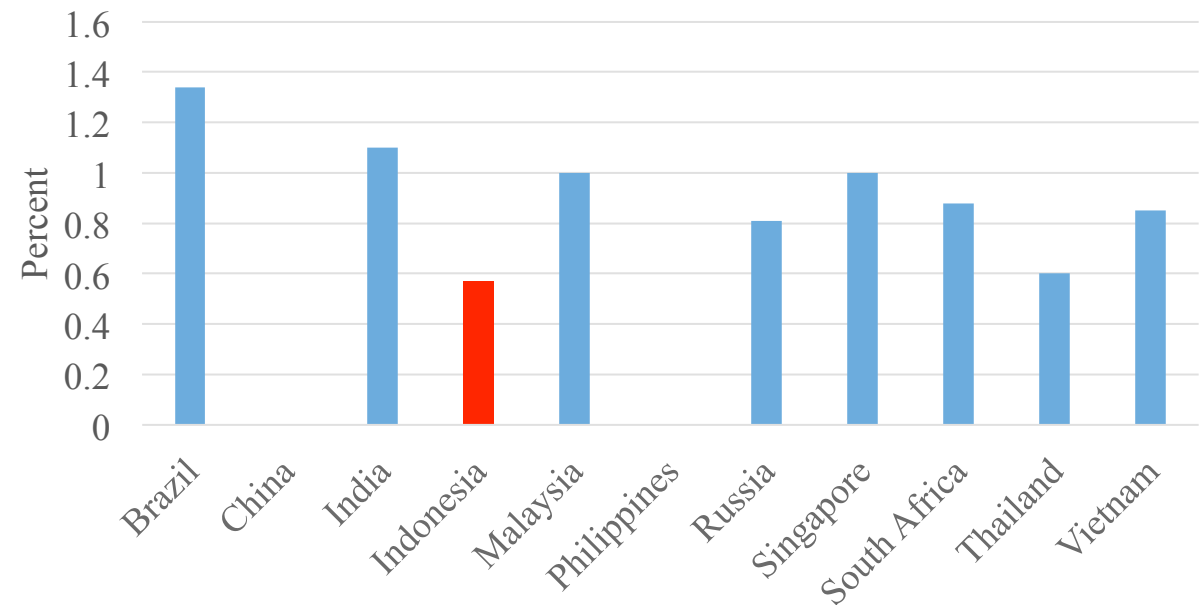
Government has little resources to spend on tertiary education

- Indonesian Constitution: 20% must be spent on education.
 - Indonesian government still focuses on basic education.
- Spending on tertiary lags behind other countries

Expenditure on tertiary as % of government expenditure on education (%)



Government expenditure on tertiary education as % of GDP (%)





Government needs to play a larger role in tertiary education

- Need more tertiary educated individuals to sustain growth
 - To achieve a GER of 50%, an additional 4 million individuals need to be enrolled.
- Need to improve equity in access to tertiary education
- Tertiary education has positive social returns
- But not much more budget capacity. Opportunity costs are large
 - World Bank (2012): financial aid provided to students enrolled in higher education covers only 3% of total costs to attend.
 - *Bidik Misi* (the government's flagship scholarship) has a quota of 130 thousand students in 2019. Previously, the quota was 65 thousand students.



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Tertiary Education Loan System



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The solution: tertiary education loan system

- A government-backed loan system is equitable
- Given large personal returns, individuals must contribute
 - Scholarships is essentially a 100% subsidy. With a loan, the government can reduce the subsidy.
- A sustainable loan system requires less government funding than a heavy subsidy
 - Or, with the same amount of funding, it can reach more individuals.
- A government-backed loan system can be used a tool to increase enrollment in areas with shortages of skills (i.e. engineering, healthcare, agriculture)
- In principle, the government is on board.
 - 15 March 2018: President Jokowi called for banks to provide student loans
 - Higher Education Law (Law 12 / 2012): government can provide an interest free loan that must be repaid after graduation and/or gaining employment
- The issue is in the design of the loan system

Problem: all current education loan models are time-contingent (mortgage-type)

- Steps

1. Set loan amount
2. Set repayment period and interest rates
3. Get monthly installment amount, same amount over the period

- Current education loan providers

- Private peer to peer financial technology companies
 - 6 months – 6 years; 12-45% interest per year
- State-owned banks
 - 5 – 10 years; 5-28% interest per year

- This model does not fix equity issues

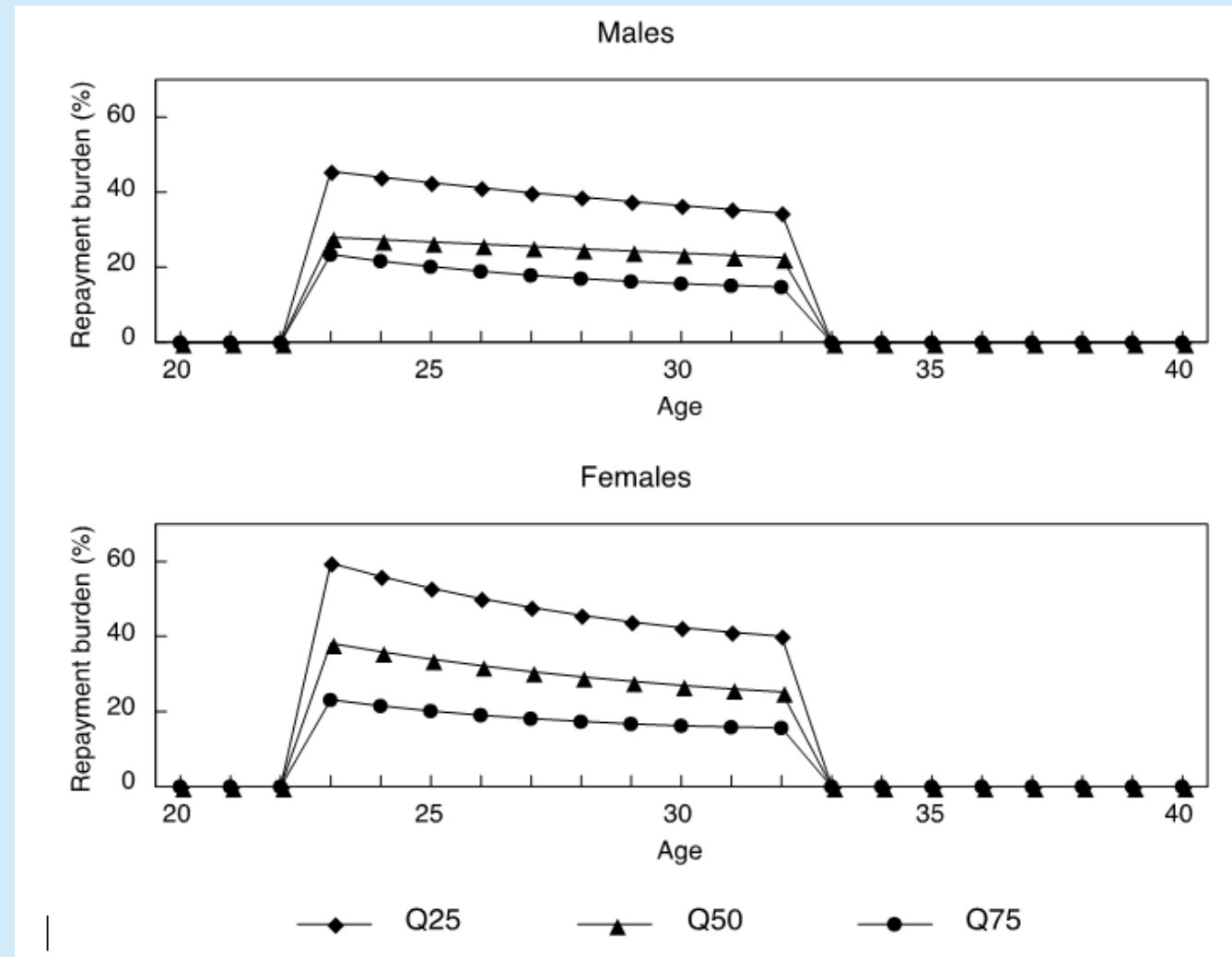
- Very selective – to minimize risks – especially without collateral
- Targets current employers looking for post-graduate studies

- This model is too small scale

- The largest private providers have about 5,000 clients/year. No info on the state-owned banks

Time-contingent student loan results in a high repayment burden

- Repayment burden = proportion of income used to repay loan
- Gross et al (2009): 8% hardship; 11% inability to manage; 20% default.
- Globally, RB of time-contingent loans:
 - Vietnam: 85%
 - Thailand: 30%
 - United States: 60%
 - Simulations in Indonesia: 20% - 60%
- This is true even when the government runs the scheme (i.e. with very low interest rates, even with implicit subsidies)

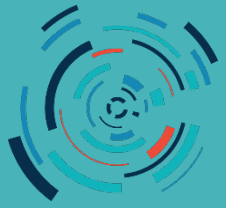




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Income contingent loan: Simulation results

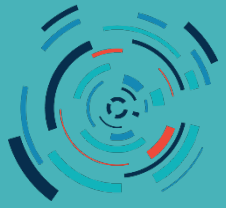


Income contingent loans could be a viable option

- Repayment starts once income passes a threshold.
- Payment is set on proportional terms (not absolute amount), which follows the age-earnings profile
- Steps
 - Set loan amount
 - Set interest rate
 - Set repayment threshold and repayment burden
 - Get repayment period and subsequently implicit subsidy
- Government operates the scheme
- Question: how long is the repayment period? How much government subsidy is needed?

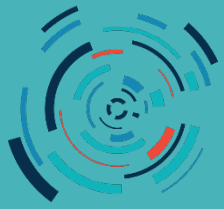
To answer, we create a hypothetical loan scheme

- Loan to cover the average cost of a four-year degree in Java and Sumatra: tuition fee and living costs.
- Repayment threshold: median income of fresh graduates (22-24 year olds). Ensures half start repaying immediately.
- Repayment period: 25 years from the first repayment. Outstanding debt after 25 years is written off.

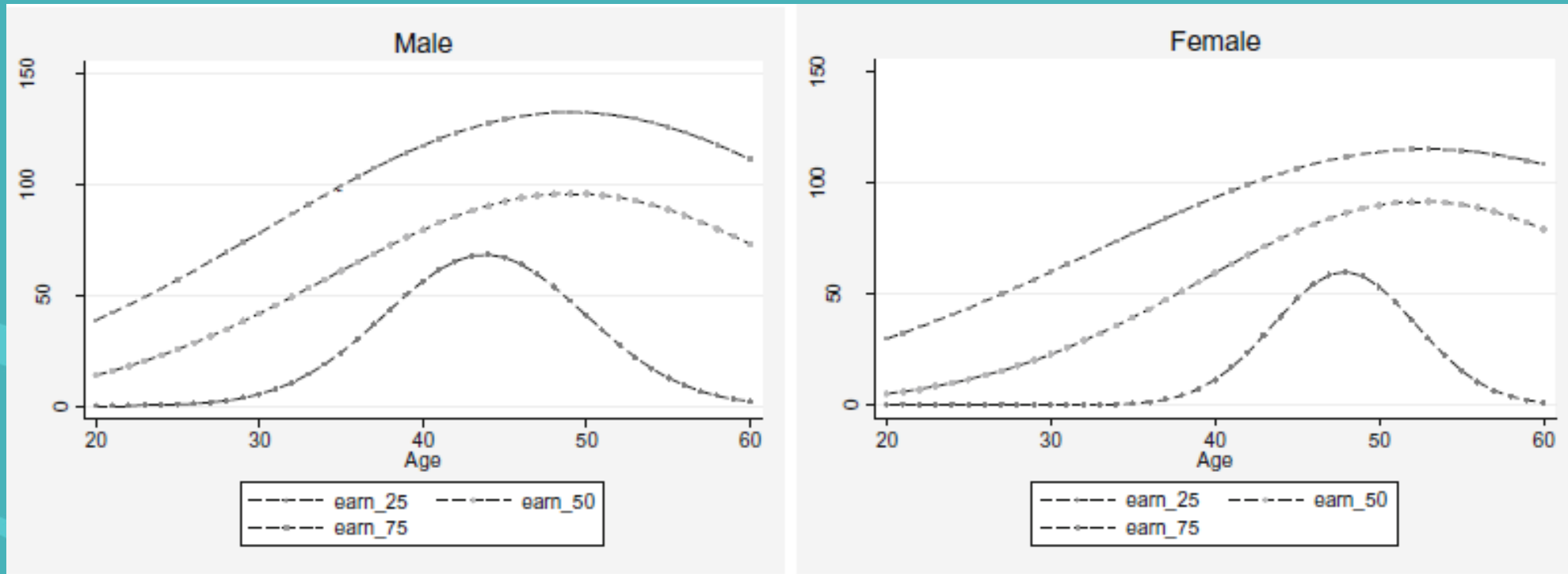


Two interest rates options

- Zero real interest rate
- 25% surcharge + zero real interest rate
- For each scheme, we set repayment burdens at 5%, 8%, or 10%.
- We now calculate repayment period and government subsidies for graduates in the 25th, 50th, and 75th percentiles of income.
- We use 2015 data from Susenas and Sakernas



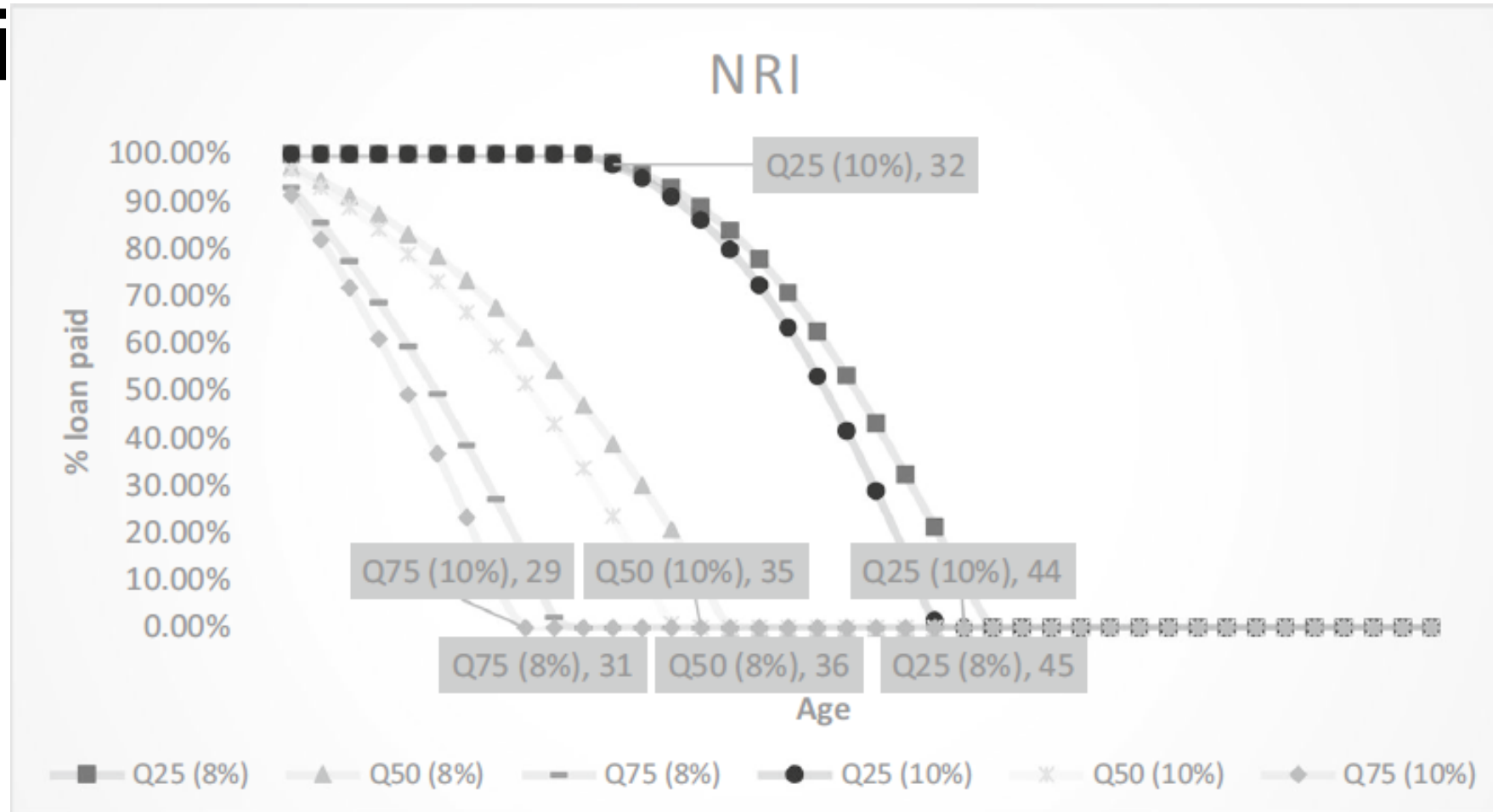
Age-earnings profile of tertiary graduates



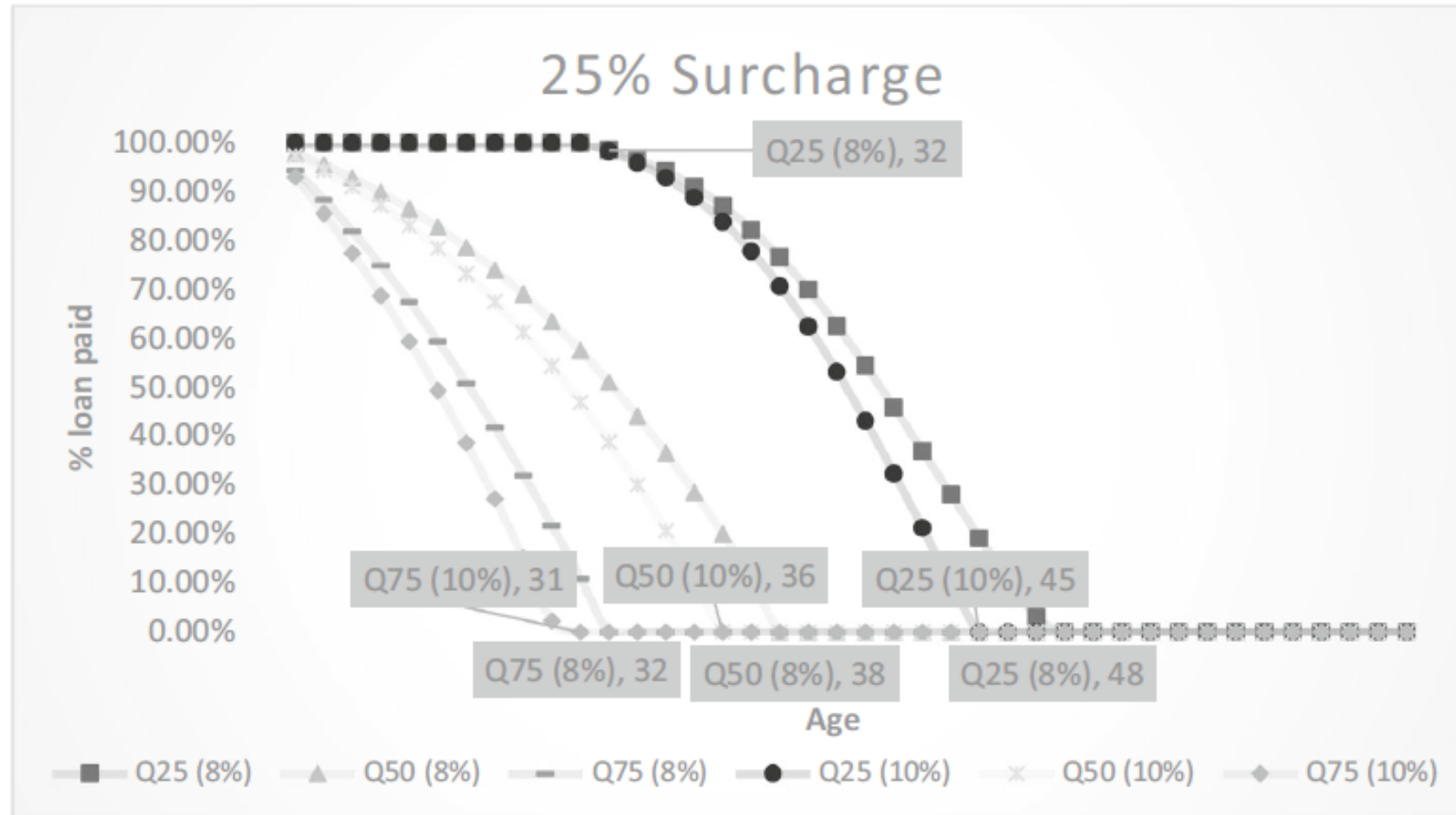
- Employment rate: 84% (91% for males; 77% for females)
- Formality rate for those employed: 90% (89% for males; 92% for females)

With the NRI scheme, all male workers will complete repayment

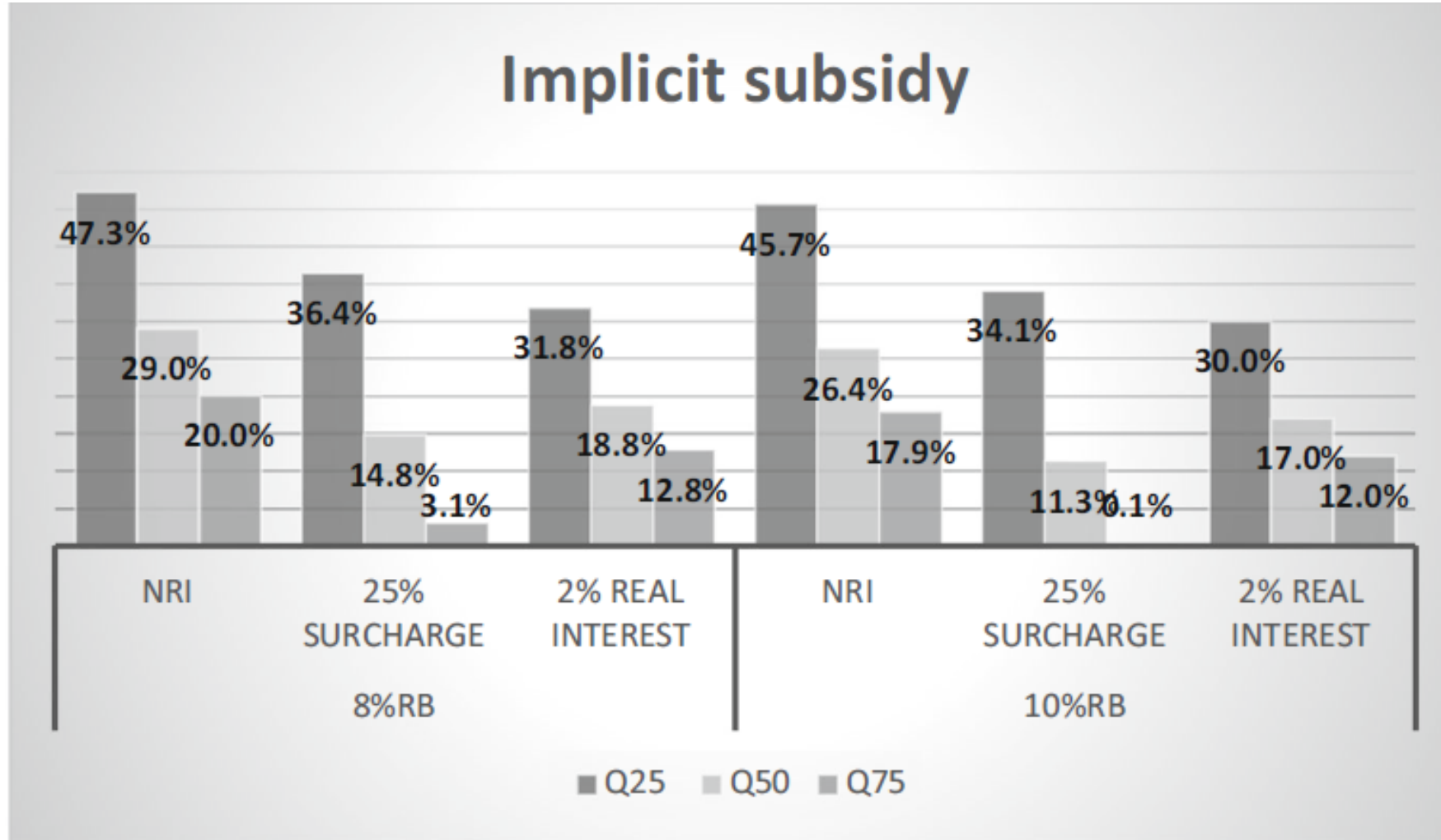
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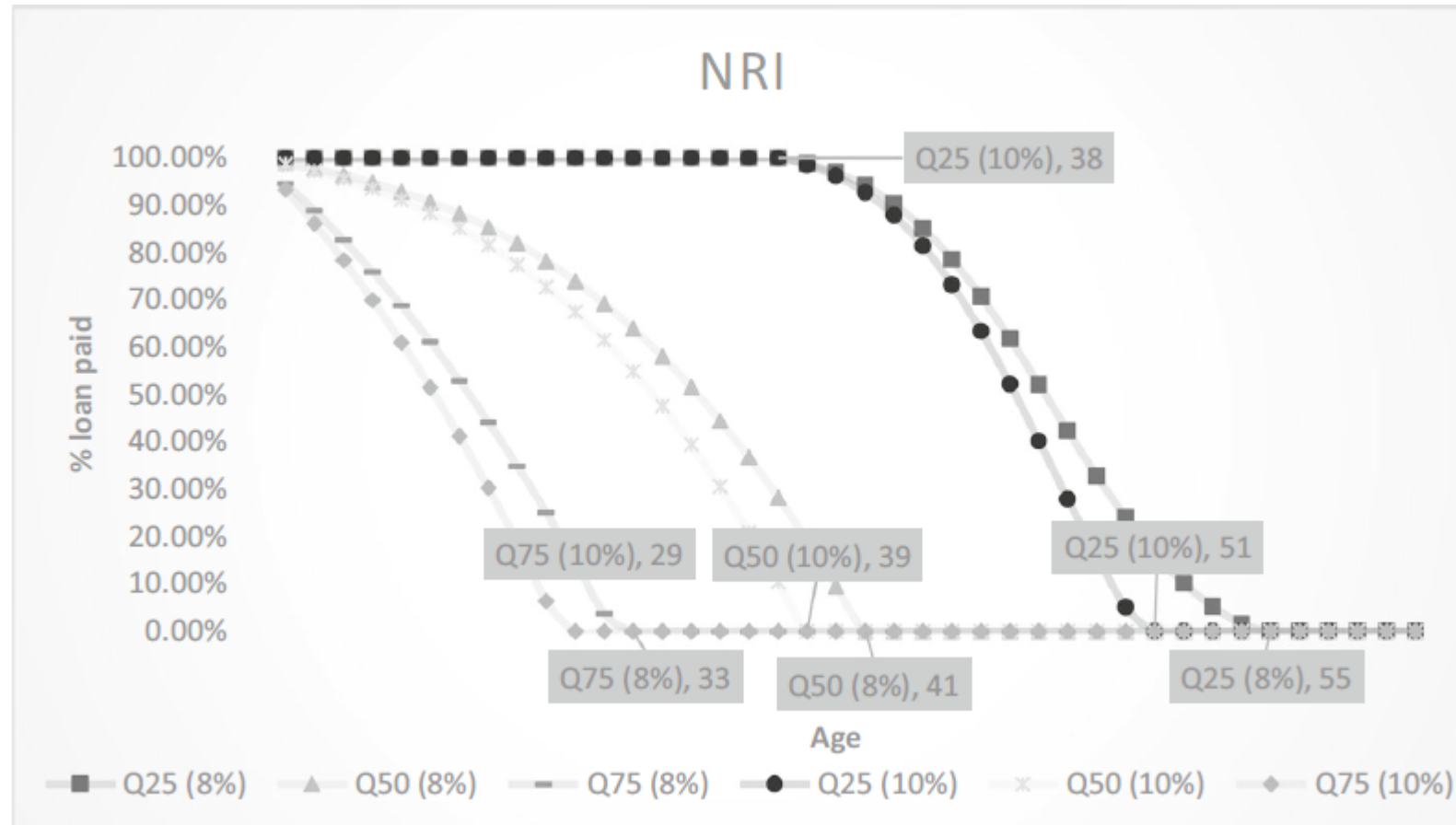
The 25% surcharge means longer repayment periods by 2-3 more years, but still all can fully repay



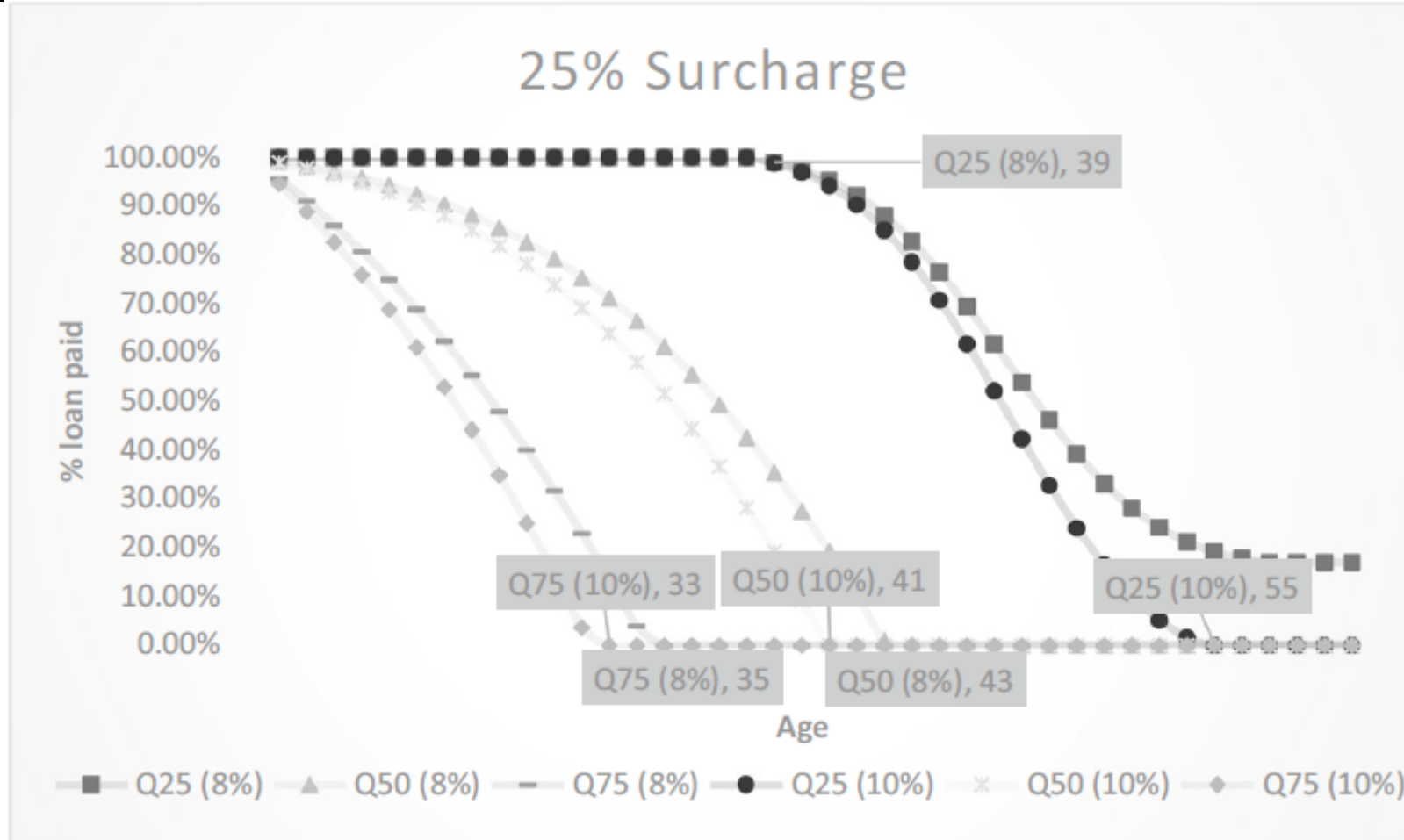
And lower implicit subsidy for government



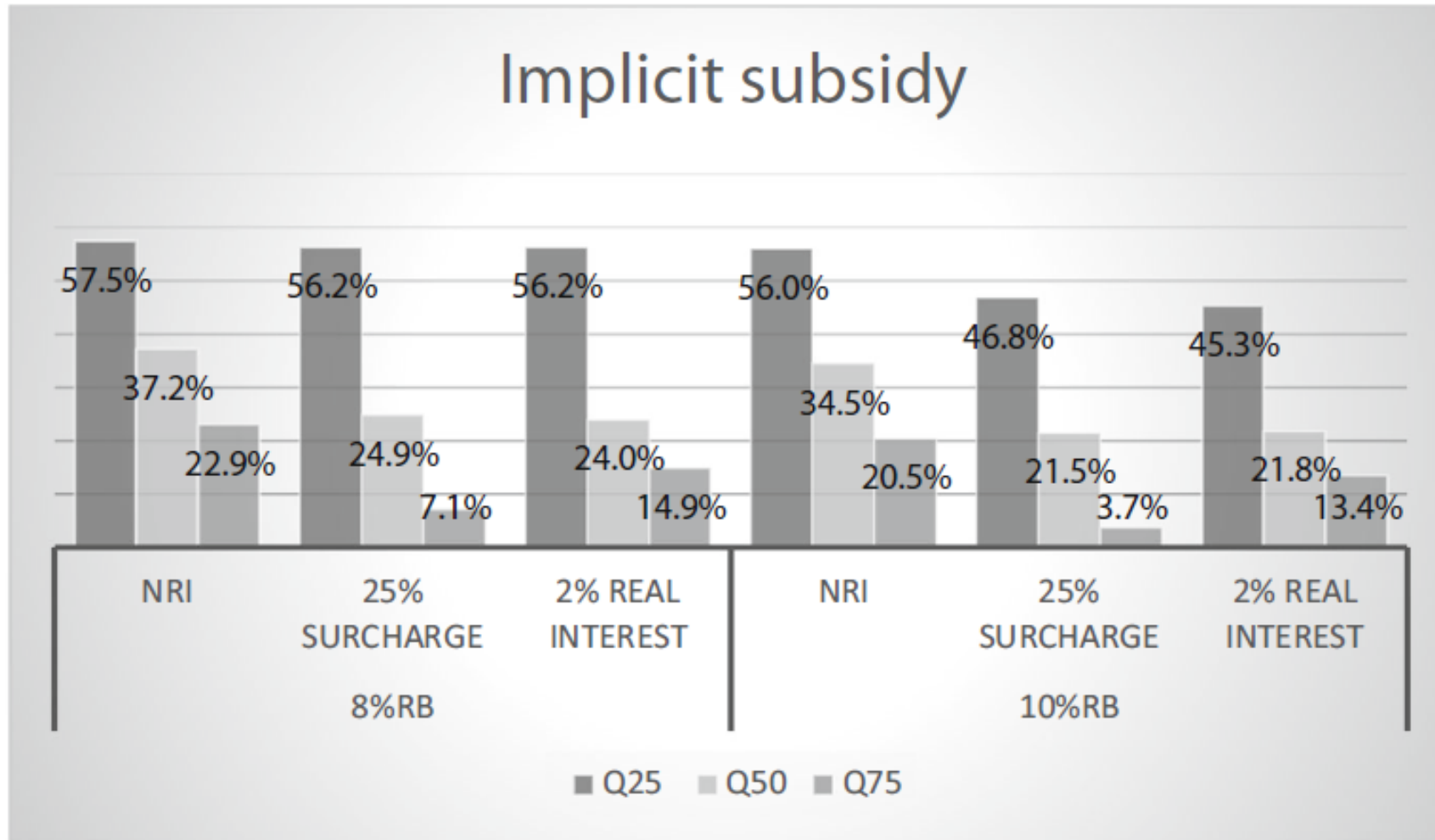
Due to lower income, females have longer repayment period; Q25 start paying later than males



Similarly, the surcharge scheme adds 2-3 years to the repayment period; but all still able to repay fully



Government needs to provide higher subsidy for females



Conclusion

- Indonesia needs a loan system in order to increase tertiary education participation
- Government must be the one running the loan system
 - Technically, MoF should run it as it needs to be incorporated into the tax system.
 - Employers could play a role, just like its role in withholding income taxes and making BPJS contributions for the employees.
- Initial simulations show that an income contingent loan system could work in Indonesia.



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A large, decorative graphic on the left side of the slide, consisting of several concentric, overlapping arcs in red, blue, black, and teal, creating a sense of movement and depth.

Thank you!