SOCIAL SECURITY PENSION IN INDONESIA OVER 2003-2009: CAUSAL RELATIOHSIP ANALYSIS

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Abstract: Empirically, there was no study on social security pension in Indonesia as related to causal relationship analysis. Quantitatively, progress in social security pension should be seen from the changes in its asset. Basically, base money in circulation, government revenue and banking investment credit are defined as exogenous variables which probably need to be examined whether the variables can explain significant changes in pension asset or not. Methodology used in this study is predictive combined with quantitative research using linear regression model to analyze causal relationship while conducting statistic-test to identify how much is the significance of each variable to the contribution to changes in pension asset. The end of this study concludes that pension asset grows significantly due to the increases in base money, government revenue and banking investment credit in such a way to note that job-creation in formal sector employment is required absolutely to extend pension coverage.

Keywords: Social security pension, base money, pension asset, exogenous variables and pension coverage

I. INTRODUCTION

Currently the coverage of employees in old age security under employee social security needs to be extended to the formal sector. The difficulties in extending old age security coverage for the private sector employees were mainly due to numerous people working in the informal sector with uncertain income, low compliance of the employer with social security law and the shortage of public finance to subsidize pension contribution to the informal sector. Nevertheless old age security had long been provided for the government employees consisting of civil-servants (CS), the national military personnel (NMP) and the national police officers (NPO) in the 1960s. In this study, old age security system is defined principally as social security pension comprising of old age pension, invalidity pension and survivors' pension which made compulsory for the employer-employees by the social security law (see Gillion et al, 2000). In other words it is social pension which provides periodical benefit payment for the retired employees as income substitute until dead which continued to their families. From the point of view of the benefit side it is social assistance which provides basic pension for the elderly financed from general taxation.

Chronologically social pension for the national military and national police officers including few civil servants working in the defense ministry was operated in 1967 based on

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Law No 6 of 1966. Not long afterwards, social pension for civil servants was carried out in 1970 based on Law No 11 of 1969. Not surprisingly, the employee social insurance (Astek) was introduced in 1978 based on the Government Regulation No 33 of 1977 in order to enforce the employers with 100 employees to participate in Astek program. It was the starting point for the protection of the private sector employees in work-injury, death benefit and old age. However, the coverage of employees in Astek did not seem to increase substantially over 1978-1992, because of the Government Regulation on Astek which did not have power on law enforcement. Accordingly, Astek was changed to the employee social security (Jamsostek) by Law No 3 of 1992 to extend a broader coverage across the private sector employees. Jamsostek as operated on 1 June 1993 was made compulsory for any employers having at least ten (10) employees and or having monthly payroll of at least IDR 1,000,000 (it was equivalent with USD 112 in 2010). Jamsostek program provides the employees with work-injury, health care, death benefit and old age security. Theoretically, Jamsostek's old age security (JOAS) is defined as social pension because all employees having reached age 55 are eligible to old-age benefit whether it is in lump-sum or in periodical payments (see Jamsostek Law No 3 of 1992's Article 14). In practice, lump-sum payment was the most preference.

The financing of social pension for the military personnel, the police officers and civil servants is based nationally on the government budget. Nevertheless the government employees shall contribute 4.75% of their basic wages to the plan as a supplement. As a result, the composition of payment for the retired was 90% of the benefit derived from the government budget and 10% of the benefit was the contribution of the government employees. Based on the benefit composition, pension plan for the government employees is definitely as tax-financed pension plan. In other words, it is pay as you go plan. However, the tax-financed pension plan does not seem to be applied to the private sector employees because of the insufficiency in income tax revenue by the government. Pay as you go is a system in which the existing contribution by the current members or the income tax as currently paid by the active-employee is directly used for the payment of pension benefit for the retired employee which falls due. Because of the insufficient income tax, the financing sources of Jamsostek's old age security are the employer contribution at 3.7% of payroll and the employee contribution at 2% of wage to the plan which amount to 5.7% is a low funding with no contribution of the government. In addition to the operation of Jamsostek covering 70,000 employers, there were about 100 pension establishments as voluntary plan with the contribution of 16-22% to the plan.

The major problems on the extension of the coverage of employees in social pension were mainly due to several factors, among others were the lack of employment opportunities in the formal sector, the majority of the formal sector with more than 70% or 26 million employees still worked in small-medium enterprises with monthly earning at not more than USD 200 (Indonesian employers' association, 2010), the application of outsourced work for 5-year contract to new employees causing the coverage in social security to be very short and the dominance of the informal sector with more than 70% of the labor-force with low earning at less than USD 50 per month (the Labor-force situation in Indonesia, National Agency for Statistics 2007). As referred to the Manpower Law No 13 of 2003, there was another obligation of the employer to prepare contingency fund for the payment of severance pay of the employees undergoing layoff before age 55. Based on the Government Regulation No 14 of 1993, any employees as Jamsostek members having permanent layoff are eligible to withdraw a lump-sum benefit in Jamsostek's old age security. The early withdrawal of this benefit account does not make valid for the employees moving to new employment even with those having coverage at more than 5 years. However, in practice many employees who moved to new employment remain to withdraw their account in old age security provided that the coverage in Jamsostek was already 5 years. In fact, there was maltreatment in the withdrawal of old age benefit conducted intentionally by the employees moving to new employment with no control of the Ministry of Manpower to stop this mal-practice.

The operation of Jamsostek program over 1993-2004 was a little success in the coverage accounting for only 40% of the wage employees (ILO, 2004). As regards, there were lots of compulsory employers which did not join Jamsostek due to the weaknesses in law enforcement and in low compliance of the employers with Jamsostek Law No 3 of 1992. By Law No 8 of 1981 regarding the general enforcement, it is the power of the labor inspectors of the Manpower Ministry and Manpower Services of the Local Governments to investigate any employers violating the Jamsostek Law. Another problem which relates to the law enforcement was the shortage of the government budget in the Manpower Ministry. Finally, the operation of employee social security was interrupted with law enforcement problem causing a system failure to happen in the coverage for all employees in 2000. As a response to this failure system, the National Government together with the House of Representatives of the Republic of Indonesia initiated the reforms of social security system in Indonesia to extend universal coverage as part of the millennium development goals (MDG) to reduce poverty in the long run in late 2004. Poverty reduction correlates significantly with the development of national social security system (NSSS) which focuses on the extension of universal coverage. As a response to this poverty reduction program, the House of Representatives approved the Bill on national social security system to be enacted as Law No 40 of 2004 dated 19 October 2004 on national social security system (NSSS). Based on Article 5 of NSSS Law, the social security carrier shall be established by the Law. As for the implementation of NSSS, the national social security council (NSSC) was established by article 6 of NSSS Law No 40 of 2004 which functions to provide advocacy regarding social security for the President and NSSC has the power of evaluation and monitoring on the implementation of NSSS as well. However, NSSS cannot be implemented until now because of the delay in following up with the Law on social security carrier. One of the major duties of the social security carrier is to administer free health care for the poor and to manage pension plan for the active employees in order to be sick and to be old not to be poor.

The organization of this paper is divided into five (5) parts to make a better understanding for the readers including those having interest in the background and operation of social security pension in Indonesia. The first part is to present the chronological events of pension establishments in Indonesia which began its operation for the public sector employees and continued to private sector employees with Jamsostek's old age security. The second part of this study is a review on the problems of social pension establishment due to the lack of coordinating policy, inconsistent public policy in social security, fiscal incapacity to fund the plan, low wage of the employees and dominated employment in informal sector causing the workers not to have access on social security pension. The third part of this research-methodology is predictive combined with quantitative research which analyzes the impact of the correlation while conducting statistic test of explanatory variables on the growth of pension asset whether there is contribution to the growth or not. The fourth part is to test the explanatory variables to whether the growth of base money, government revenue and banking investment credit can explain the growth of pension assets or not. The last part of this study is to conclude all variables can explain the significance increases in pension assets while the growth of base money as individual variable can explain significantly to the growth of pension assets.

II. A REVIEW ON SOCIAL PENSION IMPLEMENTATION

The implementation of social pension requires significant increases in the employment creation to maintain pension coverage. However, the employment situation in Indonesia has long been available in the informal sector with large proportion of people working in casual works, temporary works and self-employment. Due to the large proportion of people in the informal sector, the operation of social security pension has difficulties in the extension of coverage and in the transformation of human resources. The empowerment of the vulnerability was the shortage of the government budget while the transformation of the informal sector to the formal sector was the problem with the lack of direct investments. However, another problem which relates with the provision of pension benefit was the indexation of pension benefit due to inflation, rupiah fluctuation and layoff of employees. The following is a review on the implementation of Indonesia social pension which needs to be identified according to the provision of legal basis, fiscal policy problems, employment problem and exploratory problem solving.

1. Inconsistency in the provision of legal basis for social pension

   Employees Social Security Law No 3 of 1992 regarding Article 14 on old-age security elucidates the qualification for the old age benefit which may be paid in lump-sum or periodically and or lump-sum in part to the employees having age 55 and or having totally disabled as prescribed by the physician. Definitely, Jamsostek's old age security tends to be social pension which provides periodical payment for the breadwinner and his spouse until dead. In practice, the withdrawal of the old age benefit in Jamsostek was associated with five-year membership due to the sack of employees and coincided with the receipt of severance pay as further regulated by the Manpower Law No 13 of 2003. This is inconsistency in Jamsostek Law No 3 of 1992 which provides old age security for the retired.

   National social security system (NSSS) Law No 40 of 2004 regarding Article 39 clarified the social pension to be nationally managed by national social security carrier and to be fully funded by the employer and employee. However, the implementation of social pension has yet to be followed up with the implementing law on social security carrier in order to transform the current legal entity as private legal body into public legal body. Private legal body of the corporation does not match with social security principles and does not have power to administer compulsory social pension as a national government program. Yet there is no political will of the government to decide whether it is public legal body or not.

   The form of pension benefits as referred to NSSS Law's Article 41 includes (i) old age pension provided for any employees until dead, (ii) disabled pension given to any employees having totally disabled due to the work accident, (iii) widow or widower pension given to widow or widower as the heirs of dead employees, (iv) survivor's pension provided for the children as the heirs of dead employees until having age at 23 years, or employed and or married and (v) parent pension given to the parent as the heirs of single employee who died before pension age because of sickness or work injury. The qualified period of pension benefit which needs to be given to the parent of the breadwinner is regulated further. However, there will be synchronization problem between NSSS Law No 40 of 2004's Article 39 on social pension and Manpower Law No 13 of 2003's Article 156 on the provision of severance pay for the employee under layoff. The employers accept to contribute to social pension for their employees but there is an objection to fund severance pay.

2. Fiscal Capacity Problems

Regarding the potential problems for fiscal burdens relating to the implementation of social pension under NSSS Law, Wiener (2008) proposed the need for the provision of social pension as basic plan in order to minimize the government budget in case of the deficit financing to happen. On top of basic social pension, compulsory saving plan or provident fund for the employees is also required to supplement basic pension in order for retired employees to have lump-sum payment. However, this does not mean to be addressed for Jamsostek's old age security which may be withdrawn in lump-sum payment.

Zeeb (2008) argued there was inconsistency in the use of termed work contracts as tolerated under Manpower Law No 13 of 2003. As a result, the opportunity to employ new employees on contracts of up to five years without an obligation to contribute to Jamsostek was in stark contrast to the intentions of NSSS Law No 40 of 2004 in order for the members to have a minimal length of coverage for at least 15 years.

Purwoko (2008) considered the need for the Indonesia government to reduce inflation rate at less than 3% in order to stabilize its currency and to secure employment for the protection of private sector employees in social pension coverage. There is no choice for the government to make policy on foreign direct investments including the provision of more incentives for both foreign and local investors to create additional jobs for fresh graduates as the potential coverage in social pension.

3. Employment Problems:

As noted, more than 70% of the labor-force who still employed in the informal economy with monthly pay for about USD 60 was due to the limitation on job-creation in the formal sector. Additionally, there was inconsistency in public policies which support the need for the investment credits for new establishments. As regards, there was lack of the coordinating policies on how to transform the informal sector to the formal sector in stages.

In response to the extension of social security coverage, Angelini and Hirose (2004) conducted field-works on the characteristics of the informal sector to identify technical problems which related to the extension of coverage of the informal sector workers. In their research paper, the informal sector can be defined in terms of type of enterprise producing units including the type of employment status. As cited from their paper, a legal entity-based approach is also in use of the clarification to whether there is the legal entity or not.

Any establishments with no legal entity were the informal sector. Legal entity is described as legal status of an enterprise and or unit of economic activity based on the legal document issued by the solicitor regarding the company establishment. The characteristics of the formal sector and informal sector as explored by Angelini and Hirose (2004) in Table 1 indicated an income inequality. Table 1 presents the different characteristics between formal and informal economies. Every employer which employs regular staff with regular pay, while adopting the legal entity and registers his or her business operation to the Ministry of Labor is considered as the formal economy. Unless, it is the informal economy for example: own account workers working alone, self-employed working with his or her own family members and casual workers in the agriculture who work with their families and work in other sectors who work at their own risk. Due to the different characteristics, social security for the informal sector has some difficulties in its coverage and in the provision of its benefit package, because social security system is definitely as permanent, regular and official programs which need to be financed permanently by the members.

Table 1 Employment status for formal economy and informal economy

No	Employment status	Formal sector	Informal sector
1	Own account workers working alone and or with partners with no workers,	-	Unless registered with MOM, treated as informal sector,
2	Self-employed or working with family members,	-	Typical small home industries,
3	Casual worker in agriculture who works at his or her own risk without family members,	-	Typical rural informal workers,
4	Casual worker in another sector who works at his or her own risk,	-	Typical urban informal sector,
5	Employer with permanent staff	If registered with or at MOM on legal entity	Unless registered with MOM, treated as the informal sector.

Source: Angelini and Hirose (2004)

GTZ (2008) stated that the social security system is as formal program with consequences of making use of compulsory coverage and income related contributions which are deducted from pay-roll. Regarding the coverage of the informal sector in social security system as GTZ considered it was hardly possible to rely on compulsory pay-roll contributions. Firstly, the income flows of the informal sector are often highly volatile. Secondly, the informality of the informal sector implies the non-existence of any effective mechanism assessing the actual income of the informal sector.

The establishment of the formal sector which provides monthly wage for the regular employee is very difficult and unreliable. However, the political will of the government in any countries which intends to cover the informal sector in contributory social security plans has to rely on flat-rate contribution. As a flat rate contribution this does not involve in the redistribution of income from high to low levels and the participation in the social security should be voluntary in nature.

The relationship of social security between the need to create real incomes, the need for the future benefits and the goal of economic security coincides to each other (Purwoko, 2006). Definitely, economic security is a condition to which the people shall fully be employed to create real income and to invest in social pension for their future pension benefits. Accordingly, the employment opportunities are absolutely required to extend the coverage of new entrants in social pension.

4. Exploratory Problem Solving:

Based on Table 2, there were only 13 million employees in 2009, or about 8.5% of total labor-force having direct access to the coverage of pension plans. As noted, 8 million of 13 million were as the private sector employees or about 5.3% of total labor-force which have been covered under Jamsostek old age security. Unfortunately, about 25 million employees in the formal sector were uncovered under Jamsostek old age security as a compulsory program by Law No 3 of 1992.

Another problem related to the extension of coverage in Jamsostek old age security as social pension was basically the failure in transforming the informal sector to the formal sector due to the lack of social fund projects. For example, the projects include revolving-fund at between IDR 30-40 million for the vulnerability and incentive fund for the poor working in the informal sector to encourage saving at monthly contribution of IDR 5,000 or USD 0.55 per month for three years which may be withdrawn (Suharto, 2009). A revolving fund is given to the vulnerability consisting of 20 people to run a livestock or beef cattle business called as kelompok usaha (Kube). The successful Kube shall circulate such a fund to the new Kube. Incentive fund is applied to encourage the poor informal sector to make a very low flat saving at IDR 5,000 per month for at least three-year membership in social welfare insurance or Askessos and incentive fund will be given to the members in case of sickness and death during the membership.

Even with the difficulties in the extension of coverage across the labor-force and the transformation problem which remain, however the coverage of social pension as integral part of the social protection system which can prevent the current employees from poverty in the long run needs to be extended parallel with direct investments in order to create new jobs in the formal sector. In addition to that, law enforcement shall be intensified in order to extend coverage of the formal sector in social pension. Nevertheless, direct investments which need to be attracted both from overseas and from domestic sides are fundamental to create employment opportunities in the formal sector.

Table 2 Indonesia pension assets by the active members 2009

No	Types of pension assets and of the coverage of employees	Total assets (IDR Trillion)	Active members (Million)	Asset per member (IDR)
1	Jamsostek old age security (JOAS) as compulsory saving for the private sector employees	85	8.0	10,625,000
2	Taspen pension plan for civil servants (CSP)	60	4.0	15,000,000
3	Asabri pension plan for the national military and police personnel (MPP)	15	1.0	15,000,000
4	Private pension funds as voluntary plan (PPF)	110	(2.5)*	44,000,000
		270	13.0	20,769,231

Source: Jamsostek, Taspen, Asabri and Associaton of Indonesia pension funds (2010).* as Jamsostek members

III. METHODOLOGY

Pension asset can change and its significant growth depends on the growths of base money supply, the actual government revenue and investment scheme. Pension asset in this study is assumed as the accumulated contributions of employee and employer to be paid to social pension, old-age social security and private pension which form pension asset systematically. Empirically, pension asset is defined as the investment assets which consist of government bond, corporate bond, equity and property as investment portfolios. Pension asset investment shall be placed to various securities to minimize risk in order to generate a fair rate of returns to which the employees will benefit from this investment return on pension asset. The explanation on pension variables is presented in Table 3.

Methodology used in this study refers to predictive combined with quantitative research which analyzes the impact of the correlation while conducting statistic test of explanatory variables on the growth of pension asset whether there is contribution to the growth or not. Sources of data used in this study come from trusted and authorized bodies, viz. the Natirefers to predictive combined with quantitative research which analyzes the impact of the correlation while conducting statistic test of explanatory variables on the growtonal Agency for Statistics, the Indonesian social security carriers consisting of Jamsostek, Taspen, Asabri and the association of Indonesian pension funds. The data type used for the regression processing includes grouped economic data on base money supply, actual government revenue and investment scheme over 2003-2009.

Table 3 Pension variable and their respective explanatory variables

No	Variables	Explanation
1	Pension asset	It is the summation on private and social pensions consisting of Jamsostek old age security, Taspen pension plan for the civil servants and Asabri pension plan for the military & police personnel,
2	Base money supply	It is local currency which circulates outside of the banking deposit accounts including outside of the government treasury transaction. Such a currency is held directly by the people, which have potential for the growth of pension asset,
3	Government revenue	It consists of oil-gas revenue and income corporate & personal taxes, which can be used in part for the government expenditure including the payment of contributory pension for the public sector employees,
4	Banking investment Credit	It is banking claim on loan account of local private firms. Investment credit strives for the continuity of the firm operation which has the impact on the financial obligation of the firm of social pension.

Source: Purwoko (2010)

(Direct) Investment scheme is assumed to be relevant for the job-creation which can influence the growth of pension asset. However, investment scheme in this study is defined as banking investment credit as given to bank clients for their business expansion in order to have impact on new employment. Definitely, Indonesia pension asset is the summation or the compilation among total assets of the Jamsostek's old age social security, Taspen's civil servant pension, Asabri's military & police pension and private pension plans (see Table 4).

The notation used in this linear regression model includes Indonesia pension asset (IPA) deriving from the (4) four-major funds: (i) private pension asset including the employers' sponsorship and voluntary provident fund (PPA); (ii) Jamsostek's old age security as compulsory plan by Law No 3 of 1992 (JOAS); (iii) Taspen's civil servant pension plan based on Law No 11 of 1969 (CSP) and (iv) Asabri's military & police pension plan based on Law No 6 of 1966 (MPP).

Indonesia pension asset is defined as dependent variable which needs to be explained regarding its progress. The growth of pension asset depends on the changes in base money supply, the increases in actual government revenue and the provision of banking investment credit. Theoretically, base money supply, actual government revenue and banking investment credit are defined as explanatory variables. Base money supply (BMS) grows continuously and its impact on pension asset can be considered as potential contributions which finally make the formation of pension asset. Actual government revenue (AGR) is probably the only financial source to contribute to the public pension plan for civil servant. As explained before, the investment scheme as banking investment credit (BIC) functions to finance the firm operation to secure employment. The inter-action between progress in base money, the government revenue and the banking investment credit is supposed to have some impact on Indonesian funds (see Table 5).

Table 4 Kinds of Indonesia Pension Assets (IDR Trillion)

Year	Private pension asset	Jamsostek old age security	Civil servants pension plan	Military & police plan	Total pension assets
2003	47	23	11	2	83
2004	58	28	15	3	104
2005	64	34	16	4	118
2006	77	46	20	5	148
2007	92	57	24	6	179
2008	100	70	40	10	220
2009	110	85	60	15	270

Source: 2010 Annual Report of Jamsostek, Taspen and Asabri

Table 5 Total Indonesia Funds (IDR Trillion)

Year	Indonesia pension	Base Money Supply	Government Revenue	Investment Credit
2003	83	94	388	342
2004	104	109	467	437
2005	118	124	495	566
2006	148	151	659	639
2007	179	183	694	793
2008	220	209	962	1057
2009	270	226	986	1246

Source: Jamsostek, Taspen, Asabri and National Agency for Statistics, 2010

IV. ANALYSIS

Financially, pension asset is the asset invested in stocks, corporate bonds and government bond to generate a long tern return on pension asset for the interest of members as the first stake-holders. Economically, social pension is deferred consumption to which account it is the investment of employees in social pension for their future income. Definitely, pension asset is one of the economic factors which can increase according to the increases in base money circulation, government revenue and banking investment credit. The following is causal relationship analysis with seven (7) observations from 2003 to 2009 using the linear regression which will be expected to contribute to the development of pension models in Indonesia.

1. The effect of base money supply on social pension is potential for the increases in pension contributions, because of direct holding by the society which may be attracted effectively in social pension because of the compulsory coverage by the social security law. Investment in pension asset using base money means that disposable income is probably less. However, people have another source of income to substitute the reduction of income, but this implies that investment in social pension is deferred consumption regardless of the plan is compulsory or not (Purwoko, 2009).

2. Another financial source which may be used to fund social plan for the government employees is the government revenue which mostly derived from a tax receipt. By the social security law, the government is responsible to fund the plan for the government employees in social pension. Even the government is obliged to fund the basic old age pension for senior residents, for example in Australia and UK.

3. Comprehensively, the sustainability of social pension depends on the growing employment sector and the growth of which depends on the supply of banking investment credit that it is significant to contribute to the growth of employment in Indonesia.

4. The following is the regression equation on Indonesia pension asset

$$IPA = 6.3 + 0.19\ BMS - 0.4\ AGR + 0.21\ BIC + e$$

Whereas

IPA	: Indonesia pension asset as dependent variable,
BMS	: Base money supply as explanatory variable 1,
AGR	: Actual government revenue as explanatory variable 2,
BIC	: Banking investment credit as explanatory variable 3,
6.30	: Constant factor of IPA,
0.19	: Estimated regression coefficient of BMS,
-0.4	: Estimated regression coefficient of AGR,
0.21	: Estimated regression coefficient of BIC
e	: Disturbance error of the regression equation.

5. The linear regression outcomes on Indonesia pension asset is presented in Table 6.

Table 6 Regression Outcomes of Indonesia Funds*

No		IPA	BMS	AGR	BIC
1	Constant factor	6.3	-	-	-
2	Regression coefficient	-	0.19	-0.4	0.21
3	Standard error	(23.5)	(0.5)	(-0.1)	(0.8)
4	t-statistics	0.27	0.38	0.4	2.67
5	F-statistics	91.24			
6	Coefficient of correlation (R)	0.955			
7	Coefficient of determination (R^2)	0.988			
8	Adjusted coefficient of determination (Adj R^2)	0.978			
9	Durbin-Watson statistics	2.80			

Source: Purwoko (2010) and * calculated using SPSS Plus Version 17

6. Explanation on the regression outcomes as presented in Table 6 is as follows:

   a. Regression coefficient of Indonesia pension asset (IPA) at 6.3 indicates as constant factor. Suppose there were no base money supply (BMS), actual government revenue (AGR) and banking investment credits (BIC), pension asset in term of IDR trillion, increased constantly by IDR 6.3 trillion.

   b. To test whether the regression coefficients of BMS, AGR and BIC are significant or not to the growth of pension asset, student (t) statistics is used to measure it with confidence level of 95%. The outcome of t-statistics for BMS and AGR respectively were insignificant with the growth of pension asset, while t-statistics for BIC was significant with the growth of pension asset, because t-statistic for BIC indicated at 2.7. Insignificance of this variable to pension asset as shown in Table 6 was mainly due to the inadequate amount of money in circulation.

   c. Despite the regression coefficients of both BMS and AGR to be insignificant with the growth of pension asset. However, all of the explanatory variables as measured with F-statistics using confidence level 95% were significant with 91.24 which meant that all of the explanatory variables were significant with the growth of pension asset.

   d. To test whether there are strong correlations between all of the explanatory variables and the growth of pension assets or not. The outcome of coefficient of correlation indicated 95% which meant there were strong correlations among base money, government revenue and banking investment credit to the growth of pension asset.

   e. Additionally, all of the explanatory variables such base money supply, government revenue and banking investment scheme have explained to contribute significantly to the growth of Indonesia pension asset at 97.8% while the rest at 2.2% was contributed by non-economic factors that could not be explained in this regression model.

f. To a large extent, if base money supply increases by 97.8% while assuming the others equal zero, so the pension asset will rise automatically at 18.6%. However, if the government revenue decreases by 97.8% while assuming the others equal zero, so the pension asset will reduce at 39.12%. If the banking investment scheme increases by 97.8% while assuming the others equal zero, so pension asset will increase by 20.5%.

g. The outcome of Durbin Watson test was 2.8, which indicated that all data used in this regression model were not serially correlated to each other, because 2.8 was in between 2 and 4. In other words, there was no duplication or replication of data in the regression model.

V. CONCLUSION

The end of this study concludes the need of employees for social pension benefits in order to reduce poverty in the long run. In support of this protection, the Indonesian government shall concentrate heavily on the creation of employment opportunities in the formal sector as social policies in coordination with ministerial institutions, viz. the manpower ministry and the social ministry responsible to empower the vulnerability. The following are concluding remarks and some recommendations on the need for the employment creation in order to support the sustainability of the coverage of all employees in social pension.

1. Exclusiveness in the operation of social security system for the private sector employees was the system failure in the coverage of the informal sector workers in Jamsostek old age security, because of the law enforcement problem. Empirically, the withdrawal of Jamsostek old age benefit was emotionally involved in five-year coverage as minimum membership which needs to be met by the employees in the event of layoff to happen with the employee before age 55 and added to the provision of severance pay by the employers as stated by Manpower Law No 13 of 2003. As a result, social security system in Indonesia was reformed in 2004 as national social security system (NSSS) by NSSS Law No 40 of 2004 to remove the exclusiveness in social security system.

2. As regards, Indonesia does not yet implement social pension for the private sector employees in the real sense but Jamsostek old age security may be considered as social pension. Empirically, the difficulties in implementing social pension for the private sector employees were low wages of the employees, low compliance of the employers with social security law and weak law enforcement of the government. Another problem with the implementation of social pension was income inequality among the segments of the population. There was only 10% population which had direct access on national income, thereby causing the majority of population to have no access on national income which finally worked in the informal sector. In addition, there was no employment security for those working in the informal sector. The effect of this inequality on social security coverage was the contraction in the coverage of employees in social pension. Due to this contraction in the pension coverage, direct investment scheme is necessary for the creation of employment opportunities with the establishment of labor market to spread more jobs for the different areas.

3. Transformation of the informal sector to the formal sector is absolutely needed for the extension of coverage of employees in social pension but it will be probably hard to achieve due to the difficulties in attracting foreign direct investments and in the failure in the empowerment of the vulnerability because of the shortage of the government budget. In view of this, there is no choice for the government to provide micro-finance scheme for the vulnerability to upgrade their works in order to be independent self-employed and to be growing in stages in the long run.

4. As referred to the second conclusion, the employment security is fundamental to the coverage of employees in social pension. The stability of pension coverage depends on the length of the employees' service to their employers. The more the length of services to the employers indicates stable coverage in pension which is expected to meet minimum coverage of 20 years in order for the retired employees to qualify for pension benefit. Consistent with this policy, minimal coverage of employees in social pension under NSSS shall be met.

5. Based on the regression output, the growth of pension asset over 2003-2009 was mainly due to the changes in local currency, government revenue and banking investment credit as explained by the respective variables at more than 80%. However, there was no multi-collinearity to be found in this regression model and strong correlation to each other was a matter of matching variables with pension asset.

6. However, there were disturbance errors of each but did not seem to have the same variance in the prediction. The incidence of heteroscedasticity in casual relationship analysis among the base money supply, government revenue, banking investment credit and their impact on pension asset was merely due to the use of various data which applied for the prediction. Additionally, the characteristics of data on base money supply, government revenue and banking investment credit as used to explain the changes in pension asset were correct, accurate, original and relevant with the specification of the respective variables so that there was no autocorrelation in this regression model.

7. Last but not least, there was no empirical study on Indonesia pension asset related to causal relationship analysis between direct investment scheme and the growth of social pension. However, the outcome of this study may be expected to contribute authentically to the growth of Indonesia pension asset as one of empirical findings. Regarding social pension, there is, of course, any expectation for the private sector employees to have access to social pension through the implementation of National Social Security System Law No 40 of 2004.

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