Table 1: Expected impact of SS reform and child allowance under an aging population: summary

	Impact on social welfare			Impact on fertility		
	Child allowance	**SS down**	**SS up**	**Child allowance**	**SS down**	**SS up**
Models without altruism						
Small open economy	↑	-	↓	↑	-	↓
Closed economy	?	↑	↓	?	↑	↓
Models with altruism						
(1) Low initial fertility						
Small open economy	↓	-	↑	-	-	-
Closed economy	?	?	?	↑	↓	↓
(2) High initial fertility						
Small open economy	↑	-	↓	-	-	-
Closed economy	?	?	?	↓	↓	↑

Note: $n<1+r$ is assumed. "-" and "?"mean no impact and indeterminate, respectively.

Table 2: Assumptions on parameters and initial values

Parameters	(A)	(B)
a	2/3	1/3
ß	1/6	1/3
?	1/6	1/3
without altruism: z/w_0	0.8730	0.4380
with altruism: z/w_0	1.3210	0.1894
n_0**-*a*(*1*+**	-0.2167	0.2167
	low initial fertility	high initial fertility
?	1/3	
e	0	
d	1	
s	0	
p/w_0	0.2	
n_0 **(**$2n_0$**)**	0.65 (1.3)	

Note: The vaule of z is solved to make n equal to 0.65.

Table 3: Models without altrusim: steady state comparisons

(A) a=2/3, $\beta = \gamma = 1/6$

Variables	s/w_0	p/w_0	u	2n	k	w	r	c_1	c_2
Initial values	0	0.20	-1.2167	1.3000	0.0361	0.2204	3.0494	0.0306	0.1238
Small open economy									
Child allowance	0.01	0.20	-1.2166	1.3053	-	-	-	0.0303	0.1228
SS down	0	0.19	-1.2167	1.3000	-	-	-	0.0306	0.1238
SS up	0	0.21	-1.2273	1.2863	-	-	-	0.0302	0.1225
Closed economy									
Child allowance	0.01	0.20	-1.2213	1.2977	0.0357	0.2194	3.0766	0.0302	0.1229
SS down	0	0.19	-1.1898	1.3439	0.0390	0.2261	2.8984	0.0316	0.1232
SS up	0	0.21	-1.2320	1.2789	0.0357	0.2195	3.0761	0.0301	0.1226

(B) a= $\beta = \gamma = 1/3$

Variables	s/w_0	p/w_0	u	2n	k	w	r	c_1	c_2
Initial values	0	0.20	-1.4390	1.3000	0.1151	0.3243	1.4088	0.0923	0.2224
Small open economy									
Child allowance	0.01	0.20	-1.4380	1.3215	-	-	-	0.0917	0.2209
SS down	0	0.19	-1.4390	1.3000	-	-	-	0.0923	0.2224
SS up	0	0.21	-1.4482	1.2881	-	-	-	0.0915	0.2203
Closed economy									
Child allowance	0.01	0.20	-1.4462	1.3062	0.1121	0.3215	1.4336	0.0906	0.2206
SS down	0	0.19	-1.4270	1.3222	0.1196	0.3285	1.3732	0.0939	0.2228
SS up	0	0.21	-1.4516	1.2819	0.1139	0.3231	1.4189	0.0910	0.2202

Note: "Child allowance"introduces the childcare subsidy, which is equivalent to 1% of the initial wage rate;
"SS down"and "SS up" reduces and raises, respectively, the social security tax by 1% of the initial wage rate.
In a small open economy, per-capita capital stock is fixed.
"-" means fixed at the initial value.

Table 4: Models with altrusim: steady state comparisons

(A) a=2/3, $\beta = \gamma = 1/6$ [low initial fertility: n_0-a(1+ n_0)=-0.2167]

Variables	s/w_0	p/w_0	U	$2n$	k	w	r	c_1	c_2	b
Initial values	0	0.20	-1.3192	1.3000	1.1712	0.7027	0.3000	0.2869	0.3730	0.8379
Small open economy										
Child allowance	0.01	0.20	-1.3246	1.3000	-	-	-	0.2847	0.3701	0.8308
SS down	0	0.19	-1.3192	1.3000	-	-	-	0.2869	0.3730	0.8379
SS up	0	0.21	-1.3152	1.3000	-	-	-	0.2887	0.3753	0.8487
Closed economy										
Child allowance	0.01	0.20	-1.3214	1.3009	1.1662	0.7017	0.3009	0.2856	0.3715	0.8352
SS down	0	0.19	-1.3209	1.2996	1.1738	0.7032	0.2996	0.2865	0.3723	0.8356
SS up	0	0.21	-1.3176	1.2993	1.1751	0.7035	0.2993	0.2880	0.3742	0.8453

(B) a= $\beta = \gamma = 1/3$ [high initial fertility: n_0-a(1+ n_0)=0.2167]

Variables	s/w_0	p/w_0	U	$2n$	k	w	r	c_1	c_2	b
Initial values	0	0.20	-1.1502	1.3000	1.1712	0.7027	0.3000	0.4591	0.5969	0.5730
Small open economy										
Child allowance	0.01	0.20	-1.1370	1.3000	-	-	-	0.4637	0.6028	0.5870
SS down	0	0.19	-1.1502	1.3000	-	-	-	0.4591	0.5969	0.5730
SS up	0	0.21	-1.1605	1.3000	-	-	-	0.4556	0.5923	0.5676
Closed economy										
Child allowance	0.01	0.20	-1.0883	1.2826	1.2829	0.7244	0.2823	0.4875	0.6252	0.6337
SS down	0	0.19	-1.1337	1.2941	1.2068	0.7098	0.2941	0.4670	0.6043	0.5883
SS up	0	0.21	-1.2389	1.3288	1.0207	0.6712	0.3288	0.4203	0.5585	0.4992

Note: "-" means fixed at the initial value.