Can there be a global policy for financing population ageing? A reflection from National Transfer Accounts framework

Introduction

Though developed and developing countries are at different phases of demographic transition as a result of univocal increase in life expectancy most countries are witnessing increase in the share of old age population. Thus countries across the globe are facing toughest challenge of sustaining well being of its citizen throughout the lifecycle and are having the agenda of common of providing adequate social security to the ever increasing old age population. However preparedness and public policies to address the social security of elderly is not on the same page as some countries particularly in Europe have the foresight of introducing social security well in time before picking up the momentum of population ageing while other countries mostly in developing countries are caught unaware and are in primitive stage of introducing social security for it elderly population. Important point to be noted is that public policies framing the social security of any country are the demographics and prevailing social cultural norms. The size of working population supporting elderly retirees and non-working population matters in framing and adoption of social security deemed fit for the country. Social cultural norms matters when it comes to filial support to kin and relatives particularly for care giving and extending financial support to elderly. Intertwining of family and the state for protection of vulnerable sections of the population is being emphasised by Becker and Murphy (1988). In the context of the foregoing narration it is propose to assess social security of countries from Africa, Asia Pacific, Europe and South East Asia in terms of the extent of public and familial support of lifecycle deficit of old age population and also assess the level of lifecycle deficit funded by saving and assets. The study is expected to provide key policy inputs to improvise social security of developing to cope with secular increase in old age population and also to suggest whether the social security of developed countries shall be sustainable for the decades to come.

The study has policy relevance from many counts, first being that both in developed and developing countries older persons face an array of vulnerabilities including lack of access to healthcare, limited source of income and physical care (Bloom et al., 2011). Secondly, many Asian and other developing countries are ageing at a faster pace than expected which will raise old age related public spending dramatically while tending to reduce economic dynamism ($\acute{E}$des and Morgan, 2014). Thirdly, countries which traditionally relied on children for caring material needs at old age are weakening due to fertility decline and increasing nuclear families (Park, 2009; Oppong, 2006). Fourthly, at this point of time many developed countries undertaking fiscal consolidation are reforming their social security for ensuring sustainability. Lastly, no uniform methodology is used in available literature on assessment of public and familial support to social security of old age population and as such it is hard to make sense from comparability point of view.

In view of the foregoing discussion in this paper an attempt is made to assess the extent of public and familial support to meet the lifecycle deficit (LCD) of a number of developing and developed countries which includes Ghana, Kenya and South Africa; China, Japan and South Korea; India, Malaysia and Thailand and France, Germany and United States of America. National Transfer Accounts (NTA) framework (United Nations, 2013) is use as uniform analytical method for this study. For completeness of the paper NTA framework is briefly outline below.

NTA Framework

Economic lifecycle of individuals can be studied more comprehensively in terms of age patterns of labour income and consumption. Lifecycle deficit (LCD) across ages is the excess of consumption over labour income. It is high for children and the elderly; while for individuals in the prime working age, consumption is less than their income. Consumption can be public funded, self-financed, financed by other members of the household, or borrowed. On the other hand, LCD of individuals can be financed through familial support by intra- and inter-household transfers, and asset-based reallocation – that is, income from savings and assets and public transfers either in cash or in kind through various government programs and targeted interventions including social security. From the perspective of an individual in the National Transfer Accounts (NTA) framework (United Nations 2013), the balancing of excess of consumption (C) over labour income (Y_l) over the lifecycle by intergenerational public and private transfers and public and private asset-based reallocation is represented as:

$$C(X) - Y^l(X) = \tau_g^+(X) - \tau_g^-(X) + \tau_f^+(X) - \tau_f^-(X) + Y^A(X) - S(X)$$

Where τ_g^+ and τ_f^+ are intergenerational public and private transfer inflows and similarly τ_g^- and τ_f^- are corresponding transfer outflows. These transfers are from the perspective of individuals. Y_A is the asset income from capital, property and credit, and S is the saving treated as residuals. The NTA method captures the familial and the public transfers and asset-based reallocation of the population of a country integrating age into the National Accounts. It therefore has an edge over other methods of intergenerational familial and public economic support system of a specified economy.

Conventional measure of dependency of old and young on working age population depends only on age distribution and do not reflect the labour income and also monetary values of consumption both public and private for healthcare, education, food and other consumptions. Introducing age into the National Accounts the paper uses per capita age pattern of consumptions and income and a more reliable measure referred to as economic support ratio which is the effective number of producers as percent of effective number of consumers.
That is, economic support ratio (L/N) is defined as

$$L(t)/ N(t)= \sum\gamma(a)P(a,t)/\sum\theta(a)P(a,t)$$

where, P(a,t) is the age distribution of a population at time t, $\gamma(a)$ and $\theta(a)$ are age pattern of earning and consumption respectively.

Sources of data

Age specific labour income (Y_l), private consumption (CF) comprising of consumption for health (CFH), education (CFE) and others (CFX), public consumption (CG) the totality for health (CGH), education (CGE) and others (CGX), familial transfer inflows (TFI) and outflows (TFO), public transfer inflows (TGI) and outflows (TGO), asset based reallocations private (RAF) and public (RAG) for the seven countries used in this study are available in NTA Project (www.ntaccounts.org). NTA estimates of these age specific profiles of familial and public consumptions, transfers and reallocations are

based on average values of persons in each age group which are adjusted for National income and Product Accounts (NIPA) and comparable across countries.

Results

Table 1: Economic support ratios for selected counties for 2015, 2035 and 2055

Region/Countries	Reference Year	Year 2015	2035	2055
Africa				
Ghana (GHA)	2005	41	46	52
Kenya (KEN)	2005	43	46	48
South Africa (ZAF)	2005	55	60	60
Asia Pacific				
China (CHN)	2007	53	44	39
Japan (JPN)	2004	45	40	36
Republic of Korea (KOR)	2010	52	44	38
Southeast Asia				
India (IND)	2004	56	60	58
Malaysia (MYS)	2009	55	57	54
Thailand (THA)	2011	61	56	50
Europe/West				
France (FRA)	2011	46	41	40
Germany (DEU)	2008	49	41	39
Spain (ESP)	2008	54	45	40
United States (USA)	2011	54	50	48

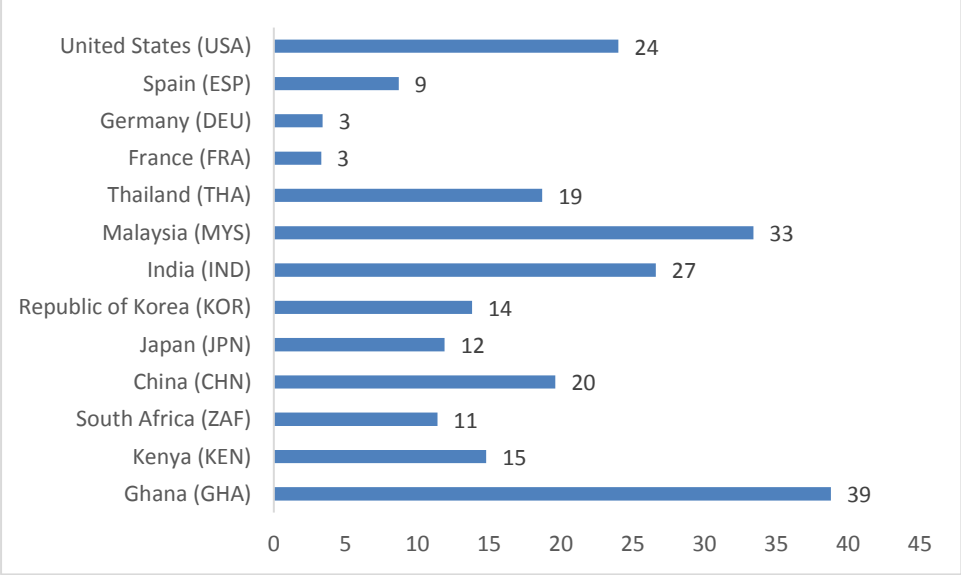

Figure1: Percent share of consumption needs of 65+ met by labour income

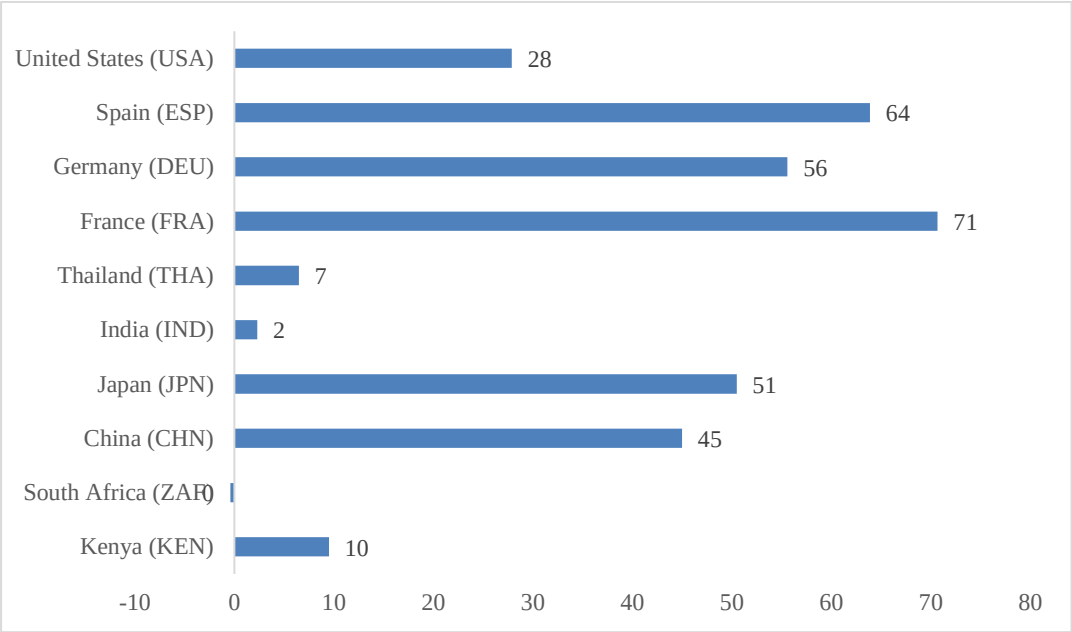

Figure2: Percent share of consumption needs of 65+ met by public transfers

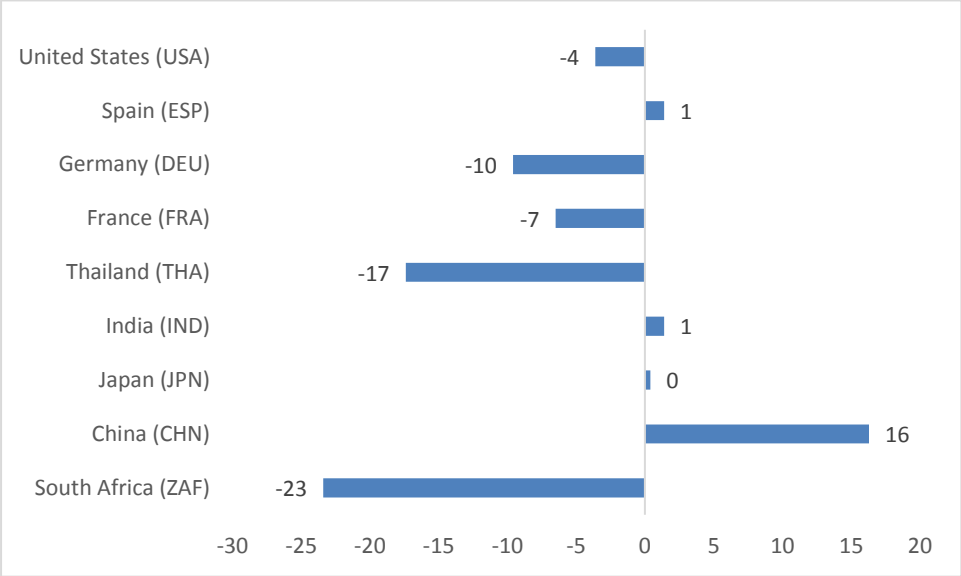

Figure3: Percent share of consumption needs of 65+ met by private transfers

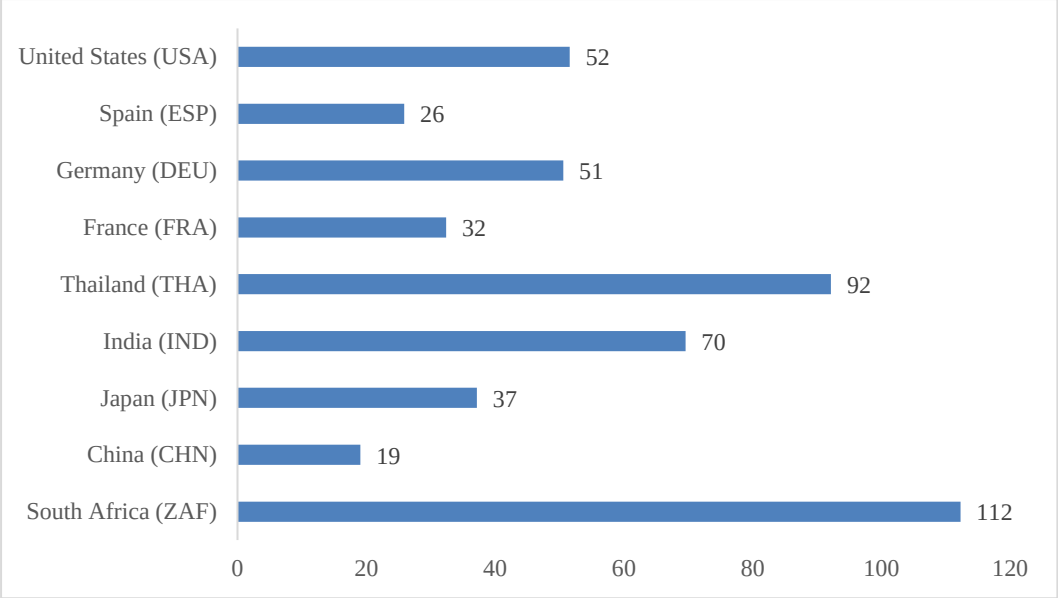

Figure4: Percent share of consumption needs of 65+ met by asset-based reallocations

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