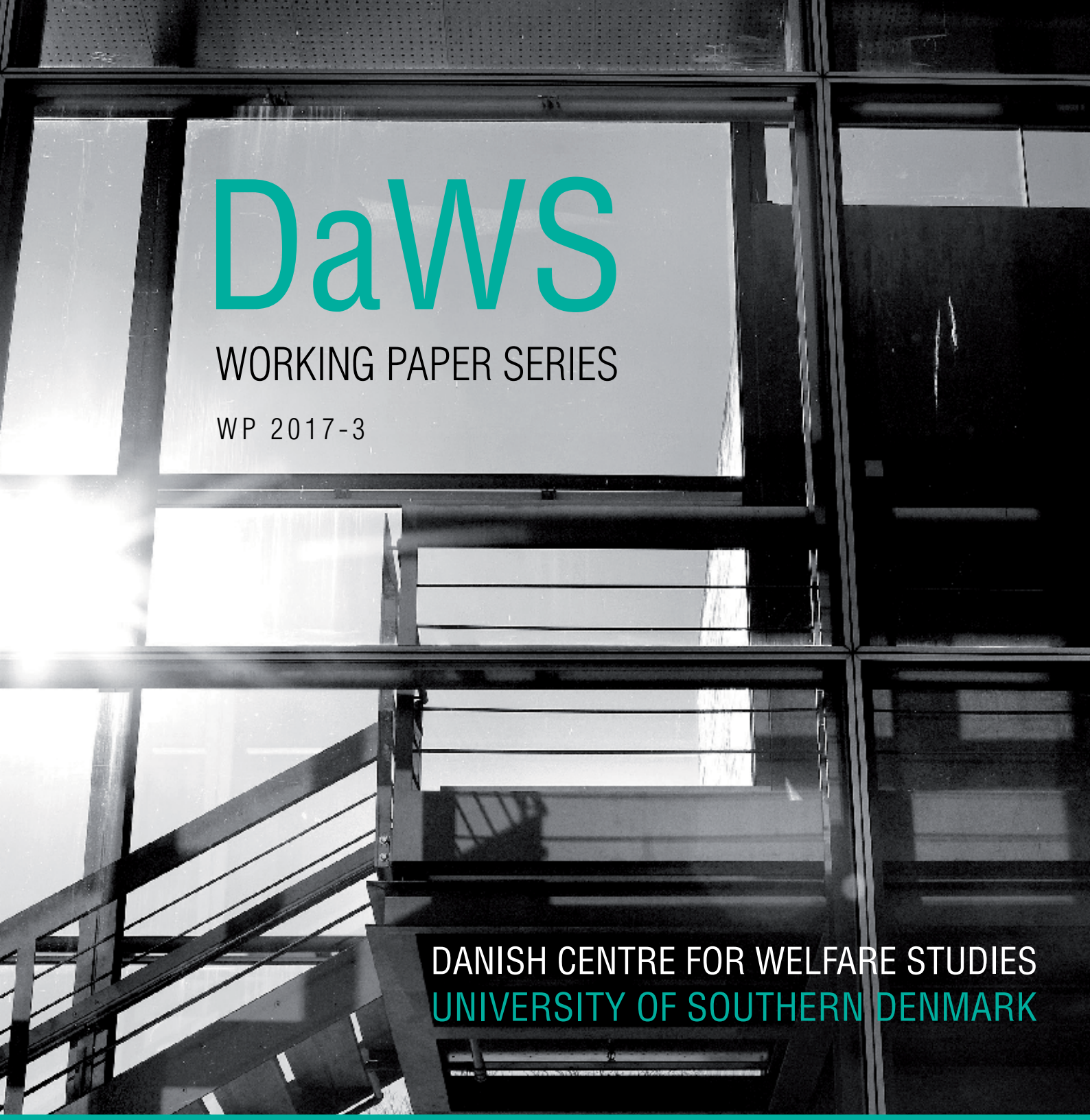

DaWS
WORKING PAPER SERIES
WP 2017-3

DANISH CENTRE FOR WELFARE STUDIES
UNIVERSITY OF SOUTHERN DENMARK

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FROM MEANS TO ENDS

Linking social protection to outcomes in the Global South

From Means to Ends:

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Abstract

About 73 per cent of the global population is not, or only partly, covered by social protection. Particularly in low- and middle-income countries (LMIC) the coverage of social protection is highly heterogeneous across nations. What explains the large differences in the inclusiveness of social protection across LMIC? I argue that it is crucial to differentiate between contributory and non-contributory social policies when explaining the strongly varying inclusiveness of social protection in LMIC. By analysing 100 LMIC using retirement schemes as an example, this study reveal that, in contrast to OECD countries, non-contributory schemes in LMIC are by far more inclusive than contributory ones. Furthermore, the quality of democratic institutions plays an important role for the inclusiveness of social protection. Unlike in OECD-countries, effective democratic institutions only push the inclusiveness of non-contributory social protection. In contrast, in political settings characterized by clientelism and patronage political leaders seem to use contributory social protection to compensate powerful societal groups for political loyalty.

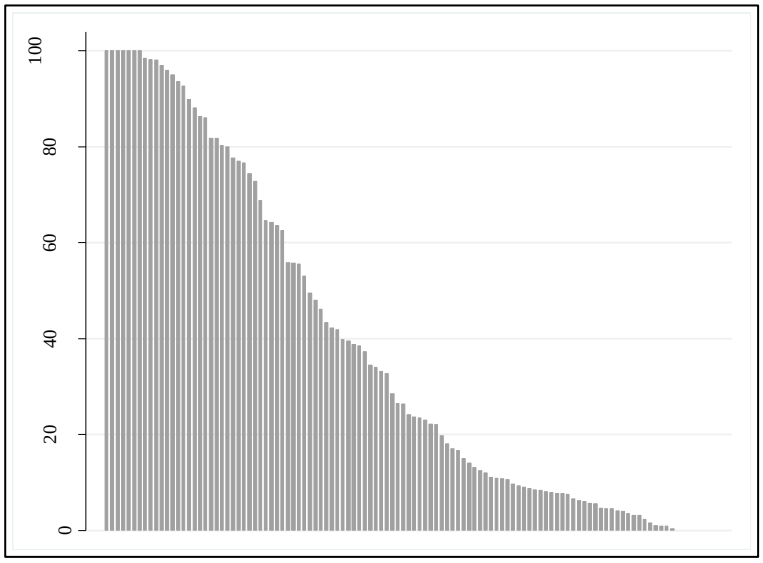
1. Introduction

In recent times, social protection has been one of the most popular instruments for promoting human development worldwide. Nearly all countries of the world have implemented some kind of social protection legislation. However, not all citizens across the globe actually benefit from social protection by the state. In fact, about 73 per cent of the global population are not at all, or only partly, covered by social protection (ILO, 2014, xxi). Especially, in low- and middle-income countries (LMIC), it is often the poorest who do not receive essential social protection (Holliday 2000). For example, in many African countries "social security always kept its character as a privilege, to which only a small minority had access" (Eckert, 2004, 472). However, this does not apply to all LMIC. Some countries like Botswana and Swaziland have achieved nearly universal coverage of single social protection schemes, or at least expanded their social inclusiveness as in Bangladesh (ILO 2014c). Overall, the coverage of social protection varies strongly across countries beyond the OECD (Fiszbein et al., 2014, 168).

Figure 1 shows the variation in the inclusiveness of social protection in LMIC using retirement schemes as the most popular program as an example. The figure demonstrates that the differences in the percentage of elderly receiving old age benefits are very large across low- and middle-income countries ranging from 0 or slightly above in some countries such as Nigeria and Laos, to 100 per cent, for example, in Namibia and Botswana. The average coverage rate across LMIC is 40 per cent and the standard deviation almost as high with 34.5. Why does the coverage of social protection differ so

strongly across nations? Why have some LMIC introduced universal systems while social protection in other countries only covers a small group of society?

This paper aims at explaining the contemporary variation in the inclusiveness of old age protection across low- and middle-income countries (LMIC). Identifying the driving factors of the coverage of old age protection is of particular relevance since large parts of the population in LMIC are dependent on effective social protection schemes. Retirement benefits are in many regions of the world the only available income for people in LMIC. Old-age programs are especially suitable since they are the most widespread social protection program across the world and needed everywhere independently of the labor market structure. Nearly all countries on the globe have introduced at least one, and often more, old-age schemes (Schmitt et al., 2015). Moreover, old age expenditure "often account for a high proportion of public spending" (Lloyd-Sherlock, 2000, 2160).



Notes: the y-axis displays the number of people who receive a pension in relation to the total number of people above statutory pensionable age for the latest available years. Data is used from ILO (2014).

Figure 1: Total coverage of retirement schemes in LMIC

I argue that it is crucial to differentiate between contributory and non-contributory social policies when explaining the inclusiveness of social protection in LMIC. Unlike in OECD-countries, socio-economic and political factors influence the inclusiveness of social protection differently in dependence of whether contributory or non-contributory systems are considered. For example, even though politicians in autocracies as well as in democracies opt for social policies as instruments to enhance regime survival (Knutsen and Rasmussen, 2014), they use different types of social policies to achieve this aim. In effective democratic settings, it is rational for political leaders to expand the inclusiveness of social protection via non-contributory systems in order to target their winning coalition and attract the electoral support of the broad mass. In contrast, politicians in more clientelistic regimes use contributory social protection to provide benefits to powerful societal groups such as the military and urban formal workers as compensation for political loyalty. Contributory welfare programs in authoritarian regimes are assumed to "serve as vehicles of clientelism" (Rudra, 2004, 699).

To date, comparative welfare state research dealing with social protection in LMIC has not paid much attention to the inclusiveness of social protection but has been concerned with the explanation of the introduction of social protection (e.g. Carnes and Mares, 2013, Kangas, 2012, Usui,

1994, Schmitt et al., 2015). The few studies that are dealing with the coverage of social protection are mainly descriptive in nature (e.g Palacios and Knox-Vydmanov, 2014, ILO, 2014). Additionally, a number of case studies is available dealing with the inclusiveness of social policy in specific countries (e.g. Casey and McKinnon, 2009, Seekings, 2012, Pelham, 2007). Comparative studies explaining different outcomes of social policies are almost inexistent. One main reason for this is the highly limited data availability for LMIC. Data on the coverage of specific social protection has only been made available within the last years.

The paper makes the following contributions to the existing literature. First, it elucidates the outcomes of social protection in LMIC and thereby overcomes the focus of existing research on Western democracies. Second, it is a first attempt to explain the great variation in contemporary inclusiveness of social protection across LMIC in a large-N framework. Third, it enhances our understanding of the different rationales and mechanisms that are underlying social protection in LMIC and emphasizes that causal mechanisms established for OECD countries have to be differentiated and adjusted when it comes to social protection in LMIC.

By using data on the effective pension coverage in 100 LMIC (ILO, 2014), the paper provides a first quantitative analysis on the inclusiveness of old age programs in LMIC. The period of observation ranges from 1990 until 2010. Furthermore, I compiled a dataset on the type of retirement schemes introduced in LMIC coding information provided by several institutions such as HelpAge International, the ILO, the World Bank and the U.S. Social Security administration.

The estimation results reveal several interesting findings. First, the type of retirement scheme highly influences the inclusiveness of social protection in LMIC. In contrast to OECD countries, non-contributory pensions (NCPs) in LMIC are more inclusive schemes than contributory pensions (CPs), for example, due to large societal groups in the informal labor market not covered by CPs. Second, the incentives created by political institutions differ fundamentally with regard to NCPs and CPs. In effective democratic regimes, expanding the inclusiveness of NCPs to cover broad groups of the society is a reasonable strategy for politicians when pursuing office- and policy-specific objectives. In contrast, in institutional settings characterized by clientelism and patronage political leaders seem to use contributory social protection to compensate powerful societal groups for political loyalty. Third, socio-economic factors such as the dependency ratio and fertility rates affect the coverage of contributory and non-contributory social protection differently. For example, while welfare provision by the family seems to be a functional equivalent in contributory pensions, this does not apply for non-contributory schemes.

To develop my argumentation and my empirical analyses, I proceed as follows. In the next section, I elucidate the type of retirement schemes introduced in LMIC and the differences in the coverage separated by NCPs and CPs. Section 3 discusses how the type of retirement schemes influences the inclusiveness and how the influence of political and socio-economic factors vary in dependence of whether considering non-contributory and contributory systems. In the subsequent section the data and methodology are presented in detail. Section 5 presents the empirical analyses and discusses the results. A final section concludes.

2. Old Age Schemes Across Low- and Middle Income Countries

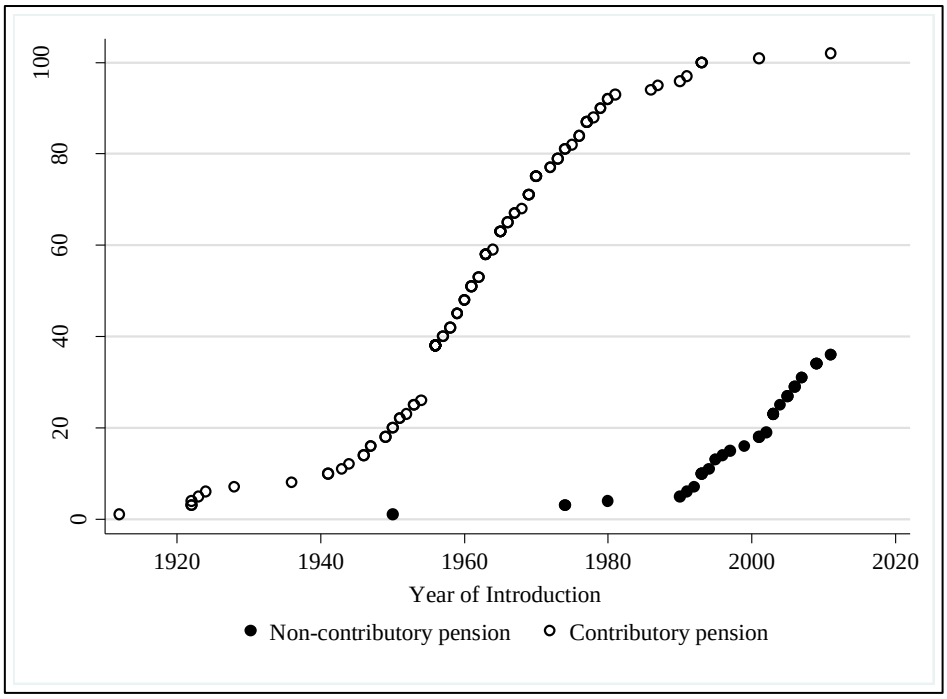
What do pension systems in low- and middle-income countries (LMIC) look like? Which retirement schemes exist and how inclusive are they? The first pension systems in LMIC have been introduced in the first half of the 20th century mostly as earnings-related social insurance systems (see figure 1; Mahon et al., 2015, Lloyd-Sherlock, 2000, 2161). Social insurance systems are based on the contributions made by wage-earners. Pension payments are therefore directly related to wages (Carnes and Mares, 2013). Still today, social insurance is the most widespread and dominant

retirement scheme across LMIC. Only few countries have introduced provident funds in the first place.[1] Schmitt (2015) has demonstrated that the introduction of provident funds has been clearly pushed by the British colonial empire. As a consequence this form of retirement scheme can only be found in former British colonies in Asia and Africa. Very few countries relied on mandatory individual accounts to protect elderly in the case of old age.[2] Earning-related schemes, provident funds and mandatory individual savings are contributory pensions (CPs), since pension benefits are dependent on individual contributions which are related to the previous earnings (ILO, 2014, Johnson and Williamson, 2006).

Over the last decades more and more countries have introduced non-contributory pensions (NCPs) as an additional pension pillar.[3] In contrast to CPs, NCPs are tax-financed and beneficiaries receive pensions independent of contributions. NCPs are often labeled as social pensions and can be universal, pension-tested or means-tested (ILO, 2014, Carnes and Mares, 2013). Means- and pension testing denotes that the income of a person is evaluated and pensions are only provided to elderly whose income is below a certain threshold (ILO, 2014, 76). In contrast to means- and pension-testing, universal pensions are paid to everyone above a certain age.

Figure 2 shows the spread of CPs and NCPs since the beginning of the 20th century. It indicates that in almost all LMIC pensions are provided through at least one scheme. The heyday of introducing social insurance was in the 1950s.[4] In contrast to CPs, the introduction of non-contributory pensions (NCPs) is a comparably recent development and has been implemented mainly since the 1990s with few exceptions such as South Africa[5] and Brazil being early birds (Barrientos, 2009). NCPs have been mainly introduced in Latin American countries as means-tested NCPs and on the Asian continent while in Africa only about 20% of the countries have introduced tax financed NCPs (Brooks, 2015; Overbye, 2005, 310).[6] In most African countries, social insurance is the only pension program existent and typically available only for some segments of the population. Overall, CPs are by far more wide-spread than NCPs. In the sample analyzed in this paper, 39 countries have introduced NCPs in most cases as additional pillar compared to more 102 countries that have CPs.

[1] A provident fund is a compulsory saving where the employer and the employee make periodical payments without a government contribution. The benefit is equal to the savings plus interests (see Williamson and Pampel 1991).
[2] Mandatory individual accounts as provident funds are private savings but without contributions made by the employer.
[3] Only few exceptions such as Bangladesh and South Africa introduced NCPs as first pillar.
[4] See for the spread of five classical social security schemes Schmitt et al. (2015).
[5] South Africa introduced a non-contributory pension for low-income pensioners very early in 1928 (see Brooks, 2015).
[6] Besides of South Africa, Namibia has introduced a universal NCP relatively early in 1992 shortly after gaining independence from South Africa and few countries such as Botswana and Lesotho followed suit.



Notes: y-axis = the number of countries that have introduced a certain retirement scheme

Figure 2: The spread of NCPs and CPs across LMIC

How do these patterns of old age schemes influence the inclusiveness across LMIC? Does the coverage of old age protection systematically differ between countries with different types of retirement schemes, namely CPs and NCPs? Figure 3 displays the number of pension beneficiaries in relation to the total number of people above statutory pensionable age separated by countries which only have a CP system (left box plot) and countries which also have a NCP (right box plot).

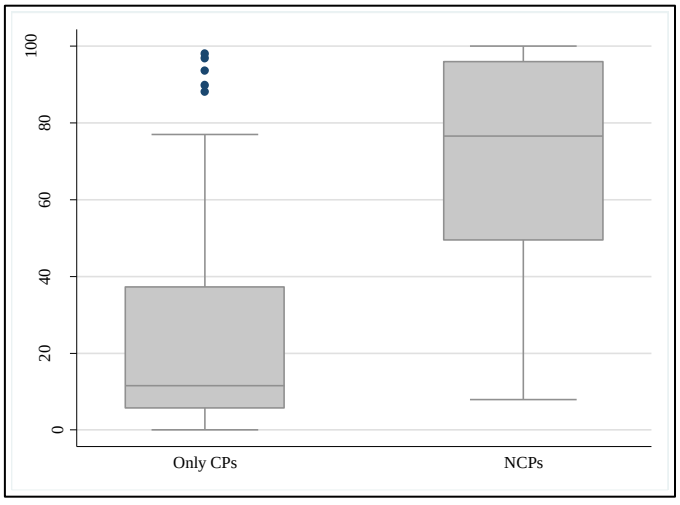


Figure 3: Coverage rate of retirement schemes separated by type

The figure demonstrates that the coverage rate highly differs among countries which only have a CP and among those which additionally have a NCP. The standard deviation in both groups of LMIC is high and comparable in size (27 for LMIC with CPs and 29 for LMIC which also have NCPs). In LMIC only relying on contributory systems, some countries such as Pakistan and Lebanon have very low coverage

rates close to zero while in other countries such as Tunisia or Georgia the great majority of elderly receive some kind of old age benefits. In LMIC which also have a non-contributory pillar the coverage rate is also very diverse. While the inclusiveness in some countries such as Kenya and Colombia is very low, other countries (e.g. Botswana and Namibia) have introduced universal NCPs where almost 100 per cent of the population above statutory pensionable age receives old age benefits (e.g. Botswana). However, the average coverage rate is highly different between countries with and without NCP. While in countries without NCPs, on average 23.79 per cent of the elderly people receive pensions, the mean coverage in countries with NCP equals 68.13 per cent. Moreover, the distribution is right skewed for LMIC without NCPs with a median value of 11.5 indicating that more than half of all countries of this group have a coverage rate below the mean. The opposite holds true for LMIC with NCPs (mean=68.13 and median= 76.6). This stands in sharp contrast to the picture in high income countries (see figure A1 in the appendix). In Western democracies the inclusiveness of old age protection is very high and comparable in size in countries which only have a CP and those which additionally have a NCP in place.

Why is the variation in the inclusiveness of social protection so large in LMIC? Which factors drive the coverage of old age schemes? And which role does the type of retirement schemes play when analyzing the inclusiveness of social protection? The following chapter discusses the driving factors for the inclusiveness of NCPs and CPs.

3. Theory and Hypotheses

The main argument of this contribution is that unlike in OECD countries it is crucial to distinguish between non-contributory pensions (NCPs) and contributory pensions (CPs) when analyzing the inclusiveness of old age protection in LMIC. First, due to the specific preconditions in LMIC the coverage rates differ highly between NCPs and CPs. Second and also in contrast to OECD countries, the influence of socio-economic and political factors on the inclusiveness of social protection varies in dependence of whether considering contributory and non-contributory schemes.

As shown above many LMIC have introduced CPs and more concretely, social insurances, as first pillar.[7] Social insurance systems are based on formal wage employment and individual monthly payments over a specific period. Only groups of the society inside the formal labor market are covered by social security. "[F]ormal employment is a gateway for access to financial markets (pension plans, annuities), housing market (housing loans), or health care and insurance markets" (Barrientos et al., 2003, 562). Employees outside the formal labor market lack access to publicly provided insurance and income replacement in the case of old age (Brooks, 2015). In contrast to European countries, in most LMIC, social insurance has been introduced without encompassing industrialization and commodification processes (Rudra, 2007). In consequence, in many LMIC, a great share of the working age population is part of the informal labor market. For example, in Ghana, around 95% of the rural and 85% of the urban population work in the informal labor market. According to ILO estimates on average around 50% of the total output of an economy in LMIC is produced by informal labor. The fact that many people are working in the informal sector not integrated into regular wage employment implies that the group of potential beneficiaries in CP systems is low and in consequence, the basis for a broad coverage (Johnson and Williamson, 2008, Midgley, 1984, Midgley, 2013). While not directly linked to formal wage employment like social insurance systems, provident funds or mandatory individual savings accounts nevertheless require that people are able to individually pay contributions. People in LMIC are often too poor to contribute to an individual fund. In contrast to OECD countries, non-contributory pensions should therefore be more inclusive than contributory ones.

[7] In many LMIC the European colonial powers have pushed the former dependent territories in the mid-20th century to introduce social security according to social security systems implemented at home. See for the influence of colonial interdependencies on the introduction of social security Schmitt (2015).

Furthermore, I argue that the form and inclusiveness of social protection is influenced by the political institutional setting. While autocratic and democratic leaders both make use of public policies in general and social policies in particular to cater their winning coalition and secure regime survival (Bueno de Mesquita et al. 2002), they use different social policy instruments to achieve this aim. CPs in LMIC often have been introduced in highly stratified societies characterized by patron-client relations, nepotism and corruption during colonies times or shortly after independence. CPs therefore have a long clientelistic tradition. In consequence, in political regimes dominated by authoritarian non-democratic institutions, CPs are still used as an instrument by political leaders to secure elite privileges in compensation for political loyalty and as mean which serves patronage purposes (Wibbels and Ahlquist, 2011, Rudra, 2004).[8] In autocratic systems "politicians can employ preexisting clientelistic networks to target transfers to core constituencies and true partisans whose electoral support is certain (Magaloni et al. 20"06, 202). Providing CPs rather than NCPs is rational for autocratic leaders since benefit provision via CPs can be targeted towards specific powerful groups belonging to their winning coalition such as civil servants, military and urban workers in important industries. In contributory systems, the powerless marginalized groups of the society are automatically excluded as they are often not part of the formal wage labor market. In contrast, NCPs cannot be easily designed to only cater the members of the winning coalition by excluding marginalized poor people from receiving benefits. Therefore, implementing and extending NCPs are not very attractive policy choices for political leaders in autocratic settings. CPs in many LMIC therefore privilege powerful groups of a society, such as the military, civil servants, the police and formal workers living in urban areas, while particularly the rural informal labor market is excluded (Williamson and Howling, 2003). Cps such as traditional social insurance tend to "contribute to consolidating and reinforcing entrenched power structures" (Midgley, 2013, 14).

In democratic systems, a different logic applies. The winning coalition in systems with effective democratic institutions is larger than in authoritarian regimes containing the broad mass in rural marginalized areas. "[P]olitical competition has a virtous effect in generating incentives for politicians to shift their investment toward public good provision in an attempt to cater to a wider voting audience" (Magaloni et al. 2006, 202). One central objective to implement NCPs therefore has been to broaden the coverage of old age programs and to extend social protection to groups that have been excluded by CPs (Leisering and Barrientos, 2013). Since they are not dependent on previous contributions to receive an old age pension, NCPs potentially are able to include rural and marginalized groups of the society. "Competition for electoral support within democratic systems has been a driving force behind the extension of social security benefits" (Mahon et al., 2015, 204, Seekings, 2012). Democratic leaders cannot cater their winning coalition via CPs because large informal sectors, poverty and low levels of industrialization and urbanization inhibit an easy expansion. NCPs are often the only available pathway towards more inclusive old age protection. Brooks comes to the conclusion that "[t]he deepening of democracy (…) may help to explain the expansion of social assistance transfers to the poor in recent decades" (Brooks, 2015, 561). The influence of democratic institutions on NCPs is supported by country studies analyzing the politics of NCPs. For example, Pelham (2007) shows that the political decision making process around NCPs in Namibia and South Africa has been highly driven by the objective of political actors to win votes and electoral support (Pelham, 2007). Democratic systems with low levels of corruption and high government effectiveness should facilitate the implementation of inclusive NCPs (Overbye, 2005, 311). Effective government institutions avoid that only the "well-informed, mobile and best-connected older people benefit" from retirement schemes (Lloyd-Sherlock, 2000, 2162). Moreover, in democratic settings where governments are formulating policies in transparent ways people are more in favor of welfare state policies.

[8] Social insurance schemes in LMIC are sometimes even more generous for some segments of the core labor force than similar schemes in OECD countries because of lower pension ages, easy access to early exit and high generosity levels of benefits (Overbye, 2005, 313).

In sum, unlike in OECD countries the inclusiveness of NCPs in LMIC is hypothesized to be larger than the one of CPs (Hypothesis 1). The "contributory pension scheme is mainly concerned with maintaining the political support of powerful groups of workers" (Lloyd-Sherlock and Artaraz, 2014, 269). In contrast, NCPs often serve as an instrument to extend the coverage of social protection to win electoral support of the broad mass. Effective democratic institutions in terms of a government effectiveness, rule of law and corruption control should therefore push inclusive NCPs (Carnes and Mares, 2013, Brooks, 2015), while the extension of CPs rather is an instrument in non-democratic regimes to compensate powerful groups for political loyalty (Hypothesis 2). Moreover, socio-economic factors should affect the coverage of CPs and NCPs differently (Hypothesis 3).

In many countries CPs have been introduced covering only a small portion of the population and have afterwards gradually been expanded to more societal and occupational groups (Esping-Andersen, 1997). The same should apply for NCPs, which often have been adopted in urban areas and then have been expanded to rural areas. It therefore can be hypothesized that the timing of retirement schemes has a positive influence on its inclusiveness (Hypothesis 4). From a contrasting point of view, the date of introducing social security legislation does not correspond with the de facto coverage of social protection since the formal implementation of social security might only be a paper tiger that does not have anything to do with reality particularly in LMIC.

In the next section, I address the research design, the measurement of the main variables of theoretical interest and briefly discuss alternative factors that might be relevant for the effectiveness of old age systems and hence are included as control variables.

4. Data and Method

The main dependent variable is the coverage rate of the national retirement schemes. This indicator relates the total number of beneficiaries to the number of elderly above statutory pensionable age. The data for 100 LMIC is taken from the ILO (2014), which reports coverage rates for the latest available years mainly stemming from 2008 and 2011. There is no time-series information available due to data restrictions for LMIC. I therefore conduct cross-section analyses. A cross-section design in this case is an appropriate modelling strategy considering the fact that the focus of the paper is to elucidate contemporary differences in coverage rates across LMIC. Since effects of the independent variables cannot be expected to be realized within one year or driven by a specific year, I calculated the country-specific average in the 10 years previous to the year the coverage data stem from for all independent variables.[9]

First of all, I test the influence of the type of retirement schemes using the overall coverage as dependent variable (table 1). Since I expect that political and socio-economic factors unfold different effects for the inclusiveness of NCPs and the one of CPs, I additionally estimate models using the coverage rate of NCPs on the one hand and the coverage of CPs on the other hand as dependent variables (table 2).

To capture the main independent variables, namely the type of retirement scheme existent at the national level, I compiled a self-coded dataset. Information on retirement schemes mainly comes from ILO extended and cross-validated by information provided by HelpAge International and the World Bank. Within this data set, a dummy variable *NCP* is capturing whether there exists a NCP (model 1, 2, 4 in table 1). I follow the ILO and categorize social insurance systems, mandatory individual accounts and provident funds as CPs and means-testing, pension-testing and universal NCPs as NCPs. Furthermore, I include the *timing* of the respective old age scheme measured by the year of

[9] To check whether the results depend on the periodization of the independent variables, I run sensitivity analyses choosing different time spans (see model 3 and 4, table A2).

its introduction (model 3 for CPs and model 4 for NCPs, table 1). A low value indicates an early adoption of a specific scheme. To test whether effective democratic institutions are predominant for the coverage of NCPs, I include the *government effectiveness.* This indicator i.a. captures the independence of public services from political pressure, the quality of policy formulation and implementation and the credibility of the government's commitment to policies (Kaufmann and Kraay, 2015). To capture the extent to which political systems are characterized by clientelistic settings or not, I estimate the model 3 and 4 in table 2 including the *rule of law* instead of government effectiveness. This indicator measures the level of despotism of public institutions such as courts and the extent to which agents have confidence in the rules of the society and.[10]

Furthermore, I include important socio-economic factors potentially relevant for the coverage of old age schemes. The overall coverage of pension systems should first be affected by the economic situation. Implementing broad range pensions are usually costly. Countries with a low *level of GDP* captured with the GDP per capita should therefore have lower coverage rates than wealthy nations (WorldBank, 2015). Moreover, the level of *urbanization* measured by the percentage of urban population (WorldBank, 2015) should influence the coverage rate of pension systems. The poor and rural population is often hard to reach and access might be limited to urban workers excluding the rural workers (Midgley, 2013, 12, Holmqvist, 2011). A further key variable is the *dependency ratio*, i.e. the number of people above 65 in relation to the total working-age population (WorldBank, 2015). A high dependency ratio should be reflected in a high coverage rate of old age pensions. Moreover, *ethnic fragmentation* defines central cleavages in many LMIC. One serious problem for the governments is the national integration of ethnically highly heterogeneous groups (Williamson and Pampel, 1991). I expect that the coverage rate is lower in ethnically heterogeneous societies than in homogenous ones. This should especially hold for CPs. Data on ethnic fractionalization is provided by Alesina et al. (2003). Moreover, I include the size of the *informal labor market* measured by the percentage of self-employees which should have a negative effect on the coverage rates of retirement schemes (table 1, model 2). [11]

Furthermore, the inclusiveness of national retirement schemes should also depend on international factors. First, the level of *globalization* as sum of exports and imports in relation to the GDP should exhibit a negative influence on the coverage of old age due to the competitive pressure on social security arising from the embeddedness in the international market. Moreover, the *International Labour Organisation (ILO)* fosters the implementation of a broad range social protection schemes. Long-term members of the ILO should therefore have more universal old age systems than countries which joined the ILO relatively late. The influence of the ILO is measured by the length of ILO-membership in relation to the total period of observation.

Additionally, I control for the existence of functional equivalents. One central functional equivalent that provides protection for elder people traditionally has been the family (Juurikkala, 2008). There is evidence that countries with a low *fertility rate* have comparably high levels of old age expenditure. A low fertility rate should create a problem pressure to protect elderly by state-run pension systems (Johnson and Williamson, 2008, Johnson and Williamson, 2006, Holmqvist, 2011, Juurikkala, 2008). I therefore include the fertility rate to control for familiar functional equivalents to public pensions.[12]

[10] The results are almost identical for alternative governance indicators such as voice and accountability or regulatory quality.

[11] Because of lacking comparable data for LMIC, the literature commonly takes the share of self-employment as proxy for the size of the informal labor market (Fiess et al., 2010, Loayza and Rigolini, 2011; López-Cariboni and Menéndez, 2015). Studies have shown that there is a strong correlation between the share of self-employed and more direct measures of labor informality available for specific countries (for Latin American countries the correlation coefficient is above .9, as shown by López-Cariboni). Data is only available for 74 countries. Therefore, I did not include this indicator in all models in order not to reduce the number of observations.

[12] To avoid that the results are driven by multicollinearity, I checked the variance inflation factors of all models. Surprisingly, the vif values do not indicate problems arising from multicollinearity ranging from 1 to 3 maximum.

Furthermore, robustness checks are conducted to check the sensitivity of the empirical results. First, I checked whether the results in table 2 are robust against including the *statutory pensionable age* since it is not exactly identical across the states (models 1 and 2, table A1). I additionally include the existence of the respective other type of retirement scheme (i.e. the *existence of NCPs* when explaining the inclusiveness of CPs, see models 3 and 4, table A1) as control variables in the robustness estimations. In table A2, I control for the influence of the *employment rate in the industrial sector*. In model 3 and 4 in table A2, I calculated the independent variables using different time spans. Furthermore, I run sensitivity checks including actor variables[13] and the existence of a private pillar in the pension system.[14] Descriptive information for all variables is available in table A3 in the appendix.

5. Empirical Results

Table 1 presents the results for the overall coverage of pension schemes in LMIC. Model 1 includes the government effectiveness while model 2 re-estimates model 1 including the size of the informal labor market and model 3 and 4 additionally integrate the timing of CPs (model 3) and NCPs (model 4).

[13] Scholars argue that organized labor does not seem to be a driving force in developing countries for the establishment of retirement schemes (see e.g. Williamson and Pampel,1991, 35). Including the strike activity as proxy for organization of labor interests turned out to be statistically insignificant and thus support this view. The same holds true for political actors since parties in LMIC mostly do not fit into the right-left categories. I controlled the influence of the government ideology using information from the 'Database of Political Institutions' for 56 countries for which data is available. The variable turns out to be statistically insignificant in all models. The results for the actor variables are available upon request.

[14] Since this variable is close to zero in all models, I do not report the results here.

Table 1: Determinants of the overall coverage rate in LMIC

Dependent variable: Overall coverage rate	(1)	(2)	(3)	(4)
Globalization	0.0999	0.0271	0.150	0.132**
	(0.0670)	(0.0685)	(0.0994)	(0.0644)
ILO	-17.11*	-25.37**	-27.46**	-17.24**
	(9.128)	(10.16)	(10.80)	(8.365)
Dependency Ratio	3.884***	3.602***	3.175***	3.975***
	(0.593)	(0.724)	(0.740)	(0.559)
Fertility Rate	-0.0167	0.0422	-0.0875	-0.0255
	(0.0471)	(0.0576)	(0.0577)	(0.0458)
GDP per capita	0.00137*	0.000899	0.00135*	0.00109*
	(0.000695)	(0.00105)	(0.000793)	(0.000651)
Urbanization	-0.0428	-0.174	-0.114	-0.0227
	(0.161)	(0.227)	(0.213)	(0.154)
Ethnic fragmentation	-2.084	-10.70	0.0294	-4.776
	(6.785)	(8.608)	(8.098)	(6.191)
Govern. effectiveness	-0.815	2.194	2.507	-3.908
	(4.947)	(6.378)	(6.002)	(5.019)
Rule of Law				
Informal Labor Market		-0.264		
		(0.211)		
NCP	36.36***	31.27***		20.56***
	(5.626)	(6.309)		(7.098)
CP			-61.03***	
			(14.63)	
Timing NCP				-0.680***
				(0.163)
Timing CP			-0.456**	
			(0.210)	
Observations	97	74	97	97
R-squared	0.691	0.679	0.562	0.725
F	35.15***	23.71***	26.81***	53.00***

Notes: Robust standard errors in parentheses, ***p<.01, **p<.05, *p<.1

The results for the main variables of theoretical interest reveal several interesting patterns. The type of retirement scheme existent in a country is crucial for the large variation in the inclusiveness of old age schemes across LMIC. The overall coverage rate in countries with a combination of a CP and a NCP or where only a NCP exists is estimated to be substantively higher ceteris paribus than in countries which only have a CP. For example in model 1, the estimated coverage rate for countries which have a NCP is estimated to be almost 36 percentage points higher than in countries without a NCP. The estimated coefficients for NCP are positive and statistically significant at the 1% level in all four models. The existence of a NCP has a clear positive influence on the overall inclusiveness of the retirement scheme independently of the type of NCP. This does not hold for OECD countries. When estimating the same model for OECD countries, the coefficients of the type of retirement scheme existent in a country are close to zero and statistically insignificant in all models. In both cases (NCP and CP), the timing of the retirement scheme is positively related to the coverage rate. The inclusiveness old age schemes is estimated to be 0.46 percentage points higher in the case of CPs and

0.68 percentage points in the case of NCPs with every year the program being in place. Introducing a social protection scheme even though covering only a small portion of the population in the beginning seems to be a first step and schemes are gradually expanded to cover more societal groups. This finding is not self-evident since social protection legislations in LMIC are often assumed to be paper tigers which are not translated into practice.

The results for the other variables included in the models show that the overall coverage is highly driven by the dependency ratio. A large group of elder people creates a problem pressure that is translated into more inclusive retirement schemes. The coefficient is positive and statistically significant at the 1% level in all models. As theoretically expected the level of economic wealth drives the expansion of retirement schemes. Rich(er) countries typically exhibit retirement schemes covering a broader group of potential beneficiaries. Interestingly, the coefficients of government effectiveness are statistically insignificant. Effective democratic regimes seem not to have higher coverage rates than their autocratic counterparts. As table 2 will show, this is caused by the fact that the influence of effective democratic institutions on the coverage of CPs and NCPs is exactly the opposite. Surprisingly, the influence of ILO membership is consistently negative indicating that long-term members have comparably less inclusive pension system than countries which joined the ILO later. It seems that becoming a member of the ILO serves as legitimization strategy for newly independent political systems and does not necessarily go along with a specific effort in the field of social policy[15]. The results for globalization indicate that countries with more integrated economies in the global market tend to have more universal social protection systems than closed economies. Globalization seems to rather put pressure on governments to extend social protection. However, the coefficient only is statistically significant in one out of four models. Moreover, as theoretically expected the size of the informal market goes along with a low coverage rate even though the coefficient is not statistically significant. In economies heavily based on informal employment relations, the group of potential beneficiaries is lower.

Furthermore, there are several variables for which the coefficients are mixed or not reaching statistical significance. The fertility rate has only a weak mixed influence on the coverage of pension systems.[16] The results for ethnic fragmentation are mainly in line with theoretical expectations. Highly ethnically fragmented societies have slightly less universal systems than homogeneous societies. Interestingly, the coefficient of the level of urbanization is negative even though not reaching statistical significance. This result might be caused by the conflicting effect of urbanization in the case of CPs and NCPs (see table 2). Overall, the model fit of all models is very high with an R-squared around .7.

Table 2 shows the determinants of the coverage rate separated by CPs and NCPs. Model 1 and 2 uses government effectiveness, model 3 and 4 rule of law as central independent variable.

[15] This finding is in line with the results of other scholars (see for example Abu Sharkh 2010).

[16] The relationship might also go in the other direction: less developed social protection systems translate into higher fertility rate or rather less reduction in fertility.

Table 2: Determinants of the coverage rates of CPs and NCPs in LMIC

	(1)	(2)	(3)	(4)
Dependent variable	Coverage rate of CPs	Coverage rate of NCPs	Coverage rate of CPs	Coverage rate of NCPs
Globalization	-0.0207	0.279**	-0.0201	0.241**
	(0.0485)	(0.105)	(0.0484)	(0.114)
ILO	-5.740	-10.31	-8.714	-9.078
	(6.977)	(14.97)	(7.703)	(16.84)
Dependency Ratio	4.496***	-1.672	4.521***	-1.637
	(0.392)	(1.595)	(0.419)	(1.484)
Fertility Rate	-0.120**	0.395**	-0.112**	0.404**
	(0.0462)	(0.182)	(0.0441)	(0.196)
GDP per capita	0.000436	0.000939	0.000528	0.00159
	(0.000498)	(0.00225)	(0.000509)	(0.00211)
Urbanization	0.213	-0.375	0.165	-0.304
	(0.136)	(0.456)	(0.146)	(0.486)
Ethnic fragmentation	-2.911	-25.46	-3.134	-13.68
	(4.417)	(23.66)	(4.635)	(23.04)
Government Effectivness	-8.336*	29.39**		
	(4.694)	(13.21)		
Rule of Law			-7.618*	16.92*
			(4.131)	(9.868)
Observations	91	38	91	38
R-squared	0.653	0.484	0.655	0.455
F	42.02***	8.32***	39.93***	6.87***

Notes: Robust standard errors in parentheses, ***p<.01, **p<.05, *p<.1

The table reveals that many explanatory factors have a different influence on the coverage rate of CPs and NCPs. First of all, the dependency ratio, which clearly has been identified to drive the overall coverage, seems only to be relevant for the coverage of CPs and not for NCPs. The coefficient in model 1 and 3 is positive and statistically significant at least at the 1% level. The problem pressure created by a large group of elderly people is only translated into more inclusive pension system in CP systems. The effect of the dependency ratio in countries with NCPs tends to be reverse even though not reaching statistical significance. In a similar vein, the fertility rate only has a negative influence on the coverage of CPs while it is positively related to the coverage of NCPs. It seems that a traditional family system is an effective functional equivalent to state-run pensions only in CP systems. The influence of urbanization also tends to differ between NCPs and CPs. Contributory retirement schemes are more inclusive in urbanized countries while, in contrast, the inclusiveness of NCPs is particularly high in countries with large rural areas. This is reasonable because in countries with large rural areas, NCPs are the only possibility to extend the inclusiveness of old age protection. Interestingly, globalization only pushes the inclusiveness of NCPs while having a small and negative influence on the coverage of CPs. The effect of economic wealth is consistently positive. The results indicate that socio-economic

factors such as globalization, the percentage of elderly and the fertility rate very much differ in how they affect the coverage of CPs and NCPs.

Particularly interesting are the results for the variables capturing the effectiveness of democratic institutions. The respective coefficients show the opposite sign with regard to the coverage of NCPs and CPs indicating a reverse influence on the inclusiveness of social protection. Political regimes with effective democratic political institutions are more inclusive than non-democratic ones only in the case of NCPs. Political leaders in democratic systems seem not to extend CPs but rather use NCPs as an instrument to cover the broad mass of less privileged workers, who form the largest electoral group in democratic regimes (Overbye, 2005, 313). Expanding NCPs appears to be a popular strategy for democratic policy-makers to cater their winning coalition and gain electoral support of the broad mass of society (Brooks, 2015, Huber and Stephens, 2012). When public services are independent from political pressure and the implementation of policies is non-clientelistic, the coverage of NCPs is comparably high. The contrary applies for the coverage rate of CPs. More repressive countries where policy formulation and implementation includes practices of patronage, clientelism and discrimination have significantly higher coverage rates of CPs than more democratic countries. Non-democratic institutions create incentives for political leaders to make use of CPs to compensate powerful groups such as civil servants, military personnel and urban industrial workers in order to stabilize the political system. CPs seem to be used by politicians as clientelistic instrument to secure the political support of important actors. Retirement benefits are especially suitable as getting old is a social risk in contrast to others such as unemployment and sickness that all parts of the society are faced with and therefore also the powerful groups belonging to the winning coalition. These results are in line with more qualitative findings supporting the view that the extension of social protection is one instrument for authoritarian regimes to remain political stability and secure loyalty (Lloyd-Sherlock and Artaraz, 2014). In South Korea, for example, the military government introduced health insurance in 1977 for reasons of political legitimacy, especially since the health insurance of the Antagonist North Korea was assumed to be superior (Ginneken, 2003, 11). These results contrast the findings for OECD countries. When estimating the same models for an OECD country sample, the quality of democratic institutions pushes the coverage of NCPs and CPs alike. These results presented above are sustained by several robustness checks including alternative explanatory factors such as *the share of employment in the industrial sector* or the *statutory pensionable age* (see table A1 and A2 for details).

Overall, the estimations reveal the following patterns. First, the type of social protection is crucial when analyzing the inclusiveness of social protection. In LMIC, the coverage of NCPs is much larger than that of CPs. Second, socio-economic factors such as globalization, the dependency ratio and the fertility rate differently affect the coverage rate of CPs and NCPs. Third and most importantly, effective democratic institutions only realize positive and favorable effects on welfare state coverage in the case of NCPs while hampering the coverage of CPs. In democratic regimes political decision-makers have the incentive to opt for more universal NCPs when office-seeking while political leaders in authoritarian regime rather make use of CPs to secure the political loyalty of powerful groups. All three results stand in contrast to findings for OECD countries.

5. Conclusion

Social protection is assumed to be one central instrument to secure people in the case of income loss due to old age, unemployment and sickness. It is guaranteed as social right by the UN Declaration of Human Rights of 1944. However, countries highly vary in the inclusiveness of their social protection, particularly in countries beyond the OECD. The literature does not provide a satisfactory explanation for this large variation. This paper aimed at filling this gap by analyzing the inclusiveness of social protection in 100 low- and middle income countries using retirement schemes as an example. A self-coded dataset on old age programs has been compiled including information provided by the ILO, HelpAge International and the World Bank. Most LMIC have first introduced contributory schemes during the second half of the 20th century to provide social protection for the elderly. Since the 1990s, more and more countries have introduced non-contributory forms of social protection. In contrast to contributory schemes, they are independent of the individual's previous earnings or contribution. I have argued that in contrast to OECD countries it is crucial to differentiate between contributory and non-contributory schemes when analyzing the inclusiveness of old age protection in LMIC.

The inclusiveness of non-contributory systems is significantly higher than that of contributory ones. In countries with high levels of poverty, large informal markets and low industrialization, non-contributory social protection often is the only possibility to cover large parts of the society from social risks. Moreover, due to the specific conditions in LMIC the effect of socio-economic and political factors on the inclusiveness of social policies differs between contributory and non-contributory social protection. For example, it has been shown that the finding for OECD countries that effective democratic institutions matter for welfare state coverage (Rothstein et al. 2012, Rothstein and Teorell 2008). has to be differentiated in the realm of LMIC. Effective democratic institutions only fuel the expansion of non-contributory social protection while non-democratic political institutions create incentives for political leaders to use contributory social benefits for clientelistic purposes.

One consequence of the results of this paper is that existing theories mainly established for Western democracies have to be carefully reformulated and adjusted to LMIC to capture the effects social protection schemes have in countries beyond the OECD. Welfare states emerged in a different context working differently nowadays and are not simply latecomers of the Western model. Since this analysis can be regarded as a step in enhancing knowledge on the effectiveness of social protection in LMIC, it brings up several subsequent questions. One central question is whether social protection is an effective instrument in reducing poverty and social inequality as strongly emphasized by international organizations and if yes, whether all types of social protection are equally effective in fighting poverty and inequality. The empirical results of the few studies that exist so far reveal highly heterogeneous results. Some scholars state that benefit levels are too low, poorly targeted or limited in coverage to effectively reduce poverty (Midgley, 2013, 12), while others find the contrast (Mahon et al., 2015). A more comprehensive understanding of social protection in the Global South is a prerequisite in informing the contemporary struggle against poverty and social inequality especially in the poorest nations of the world.

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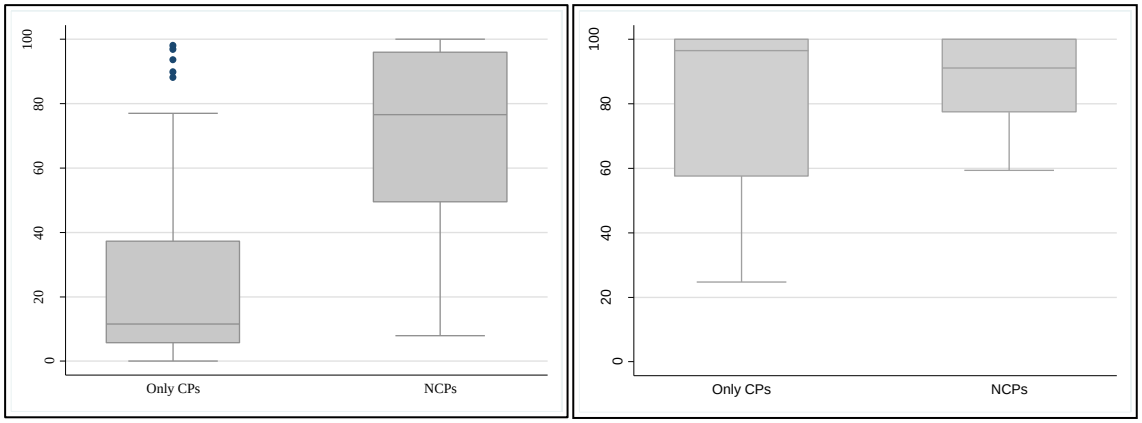
APPENDIX



Left figure: LMIC Right figure: High-Income Countries

Figure A1: Coverage of Retirement Schemes by Type of Social Protection

Table A1: Robustness check I

Dependent variable	(1) Coverage rate of CPs	(2) Coverage rate of NCPs	(3) Coverage rate of CPs	(4) Coverage rate of NCPs
Globalization	-0.00807	0.236**	-0.0236	0.284**
	(0.0485)	(0.112)	(0.0486)	(0.105)
ILO	-6.079	-7.160	-4.581	-7.151
	(7.115)	(15.43)	(6.683)	(16.37)
Dependency Ratio	4.349***	-1.249	4.458***	-1.379
	(0.355)	(1.758)	(0.381)	(1.530)
Fertility Rate	-0.117**	0.241	-0.112**	0.347*
	(0.0471)	(0.197)	(0.0467)	(0.194)
GDP per capita	0.000400	0.000616	0.000479	0.00122
	(0.000508)	(0.00233)	(0.000510)	(0.00231)
Urbanization	0.218	-0.423	0.209	-0.391
	(0.131)	(0.468)	(0.138)	(0.470)
Ethnic fragementation	-2.751	-16.64	-2.779	-25.28
	(4.680)	(23.94)	(4.472)	(22.62)
Government Effectiveness	-8.136*	24.50*	-8.990*	25.51*
	(4.766)	(12.68)	(5.050)	(13.03)
Statutory pensionable age	-0.439	2.558**		
	(0.590)	(1.144)		
Existence of (N)CP			3.921	-19.43
			(4.680)	(13.16)
Observations	89	37	91	38
R-squared	0.640	0.514	0.657	0.509
F	51.57***	6.93***	39.52***	8.97***

Notes: Robust standard errors in parentheses, ***p<.01, **p<.05, *p<.1

Table A2: Robustness check II

Dependent variable	(1) Coverage rate of CPs	(2) Coverage rate of NCPs	(5) Coverage rate of CPs	(6) Coverage rate of NCPs
Globalization	-0.00266	0.205*	-0.0409	0.275**
	(0.0554)	(0.117)	(0.0478)	(0.112)
ILO	-10.34	-23.27	-6.424	-11.17
	(8.507)	(17.46)	(7.399)	(13.67)
Dependency Ratio	4.297***	-1.272	4.831***	-1.578
	(0.455)	(1.548)	(0.441)	(1.569)
Fertility Rate	-0.154***	0.502**	-0.161***	0.287
	(0.0573)	(0.237)	(0.0529)	(0.177)
GDP per capita	0.000556	8.21e-05	0.000424	0.00102
	(0.000703)	(0.00228)	(0.000553)	(0.00223)
Urbanization	0.365**	-0.469	0.220	-0.349
	(0.139)	(0.429)	(0.151)	(0.483)
Ethnic fragementation	-2.229	-25.36	10.33	12.64
	(5.574)	(22.10)	(9.561)	(21.85)
Government Effectiveness	-12.28*	25.65*	-7.758*	22.86**
	(7.170)	(13.49)	(4.576)	(9.856)
Employment Industry	-0.262	1.596		
	(0.346)	(1.556)		
Observations	74	37	91	38
R-squared	0.675	0.490	0.657	0.481
F	27.45***	6.20***	40.17***	7.45***

Notes: Robust standard errors in parentheses, ***p<.01, **p<.05, *p<.1

Table A3: Descriptive statistics for all variables

Variable	Observations	Mean	SD	Min	Max
Dependent Variable					
Total coverage	105	40.26	34.77443	0	100
Coverage CP	98	26.01429	27.03123	0	98
Coverage NCP	39	37.59231	33.59454	0	100
Central Independent Variables					
Existence of CP	111	0.9189189	0.2741975	0	1
Existence of NCP	111	0.3603604	0.4822823	0	1
Introduction CP	102	1961.765	17.34232	1912	2011
Introduction NCP	39	1996.425	16.50779	1928	2011
Government Effectiveness	109	-0.5088409	0.5420746	-1.716316	1.002362
Rule of Law	110	-0.5278388	0.652463	-1.868017	0.9862092
Control Variables					
Globalization	108	76.47347	36.9356	1.245378	204.0911
ILO	111	0.8405678	0.3092127	0	1
Dependency Ratio	107	8.303123	3.841055	4.404145	24.28527
Fertility Rate	108	79.62881	47.18162	2.595546	218.6808
GDP per capita	108	5367.609	4471.396	572.8533	22599.99
Urbanization	110	43.96428	19.03314	8.265273	85.89273
Ethnic Fragmentation	108	0.1645606	0.278242	0	0.930175
Size of Informal Sector	80	53.08626	23.08701	13.13636	94.45
Employment industry	89	17.30337	7.729872	2.2	37.1
Statutory penisonable age	103	59.11165	3.013802	50	70

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