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Willingness to Pay for Social Health  
Insurance among the Bari Speakers of  
Central Equatoria State, South Sudan**

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Expectations of Social Capital and Willingness to Pay for Social  
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## **Abstract**

This study explores the effect of social capital on willingness to pay for social health insurance. Both quantitative and qualitative data were used to conceptualize; individual, community and organizational theories.

## Methods

The data for this study is a sub sample from a dissertation study on the perspectives of social health insurance in Post Conflict Fragile State South Sudan. A sub-sample of 233 households, from C. E. State, were used. Analytical analyses of the social capital's model were regressed.

## Findings

An average of about \$ 43.5 dollars per annum, was achieved among the five (5) counties of C.E., State: - Juba, Kejikeji, Morobo, Terekeke and Yei River. Fifty-two 52% per cent of the expected subscribers for social health insurance were at the most likely scale of paying their medical costs. The social model is statistically significant at (*p-value 0.0011*) of the 95% per cent confidence. Indeed, social capital is effective among post conflict C.E. state. It enhances solidarity in social health insurance.

## Conclusions

This research has added to the literature that positive expectations of social capital among post conflict C.E. State and willingness to pay for social health insurance is doable. Assisting impoverishers at the “most likely” scale is a significant norm of the social capital tenets. The individual within the community is bonded among his / her local organizations that is fruitful to social health insurance. Households had different barriers to act and through social solidarity, self-efficacy was very significant in explaining the variations in willingness to pay.

*Keywords: Social capital, Willingness to Pay, Social health insurance, Health Inequalities, Post conflict*

## **Introduction**

This research is based on a Ph.D. dissertation; see (Gwokorok, 2021). Healthcare budget for Post Conflict C.E. State, South Sudan has been declining from 7 % to 4 % per cent, since 2008. Likewise, the five counties of C. E. have an underfunded healthcare system and they host about 5 to 6 million inhabitants. Healthcare funding has been trickling and accessibility to healthcare services is difficult occasionally, (Bräutigam & Knack, 2004; Cometto, Fritsche, & Egbert, 2010; Varela, Cali, Pepe, & Rojas, 2016; Roberts, Guy, Sondorp, & Lee-Jone, 2017). Mortality rate in post conflict C.E. state, South Sudan is (8) eight times the world average. Under funded healthcare system can increase mortality rates, (Walsh & Warren, 1980; Lockman, et al., 2003). Besides, there are households who cannot afford to cover their medical costs (Erasmus & Nkoroi, 2002).

Funding healthcare through employer and employee contribution; either public or private mixed can alleviate health of the local population (Mathauer, Schmidt, & Wenya, 2008). Philippines implemented social health insurance despite economic hurdles (Obermann, Jowett, Alcantara, Banzon, & Bodart, 2006). Social health insurance and its variants were found to be effective in several countries (Spaan, et al., 2012).

This research used double open-ended Contingent valuation method. The respondent could supply both or single or neither of the expected contingent valuations. Several studies used willingness to pay for social health insurance (Nguyen & Hoang, 2017; Nosratnejad, et al., 2010).

## **Literature Review**

## **Solidarity and Social Welfare**

Regardless of the international living standards, a (\$1) USD per day, national funding scheme by citizens of any sovereign country is crucial. It necessitates inhabitants of their broader social responsibilities. Post conflict C.E. state, South Sudan is being distorted by social instabilities. Households are driven into self-protections and families coalesced to stay safe and alive.

Post conflict C.E. state, South Sudan needs to initiate the spirit of solidarity in tackling social issues as health care. However, South Sudanese do support each other financially during funerals and marriages. Happiness and sorrow imparts positive desires to a collective funding mechanism. Solidarity has no boundaries and our social responsibilities dictate its destiny (Reichlin, 2011).

## **Social Capital**

Social capital, when used in a meaningful way, it can produce tangible assets. It is the mutual force within ourselves that builds up over the years we live (Wonga, 2013). The benefits of social capital are tangible because there is the element of human desire that we want to achieve for society. As a result, contributing positively within a society forms a viable “social” capital. Marx and Engels mentioned that capital is the consequence of labor from multiple individuals (Marx & Engels, 1848). Many organizations have used social capital to finance social projects. Social capital can downplay income and social inequalities among the society.

## **Social Groups**

Religious groups, social clubs and tribes are horizons of social capital. The interactions of an individual within those groups have dimensions and strength. These social groups create harmony when norms and values were shared by all of the members (Sosis & Alcorta, 2003). Durkheim (Ibid) stated that households that are actively engaging in ritual acts are disposing their coexistence and encourages unity (Saito, et al., 2017). This coexistence is seen to have positive elements in achieving common motives. Households differ in giving out financial assistance to either social clubs, tribal and faith organs.

## **Social Networks**

There are several elements of social networks that have impact on social capital. Some of the social networks require regular contact with the group. These were noted in any of the religious denominations and a number of community groups. Being a member of any

established social function, there exist kinds of sharing principles for a common goal (Putnam, 1993; Portes, 1998). Community heads and government policy makers have the role to enhance social networks across the population.

### **Communal life**

Perils of health among households and communities have strong relations in making potential differences to overcome ill health. Donfouet and Mahieu (2012) argued that communities with higher level of giving kindly demonstrate higher social capital. This ability to give kindly is an indication of WTP into a formal association (Hsiao, et al., 2006). Realized benefits of social capital in health, is a recipe for health insurance.

### **Research Methods**

Paradigms of social capital are proven to be effective among the five (5) counties of C. E. State. These counties are Juba, Kejikeji, Morobo, Terekeke and Yei River.

A total of 233 households were sampled from the (5) counties of C. E. state, South Sudan. Willingness to pay for social health insurance is the main variable. This research used oral and inputted data from questionnaires as those of (Mladovsky, Soors, Ndiaye, Ndiaye, & Criel, 2014; Ware, et al., 1980; Singh, et al., 2015) contrary to those of (Shafie & Hassali, 2013).

### **Theoretical framework**

Social capital was there, the population, as a natural cause shall be pruned to health risks. Mutually inclusive, communal life will lead to health motivation when households received income and pecuniary benefits. Besides believing in benefit of social capital, cues to assist one another are also solidarity acts (Abela, 2004; De Beer & Koster, 2009). Allocating money for social activities are investments for social capital. Household's levels of social capital will be approximate to the efforts put in social activities. The more individuals are willing to pay for social services, the lesser the cost of delivery. Collectively, the expectations of social health insurance will be with certainty. As such, individuals and communities with higher social capital and solidarity will increase the expectations of social health insurance.

The following: (Kind, Faith, Social, Tribal) money and "Assisting impoverishers"; yardsticks for social capital were adopted. Kind money is the money that households donate to their community, religious entities, and social clubs and to the poor. While Faith

money is the money that household hand during religious services. Social money is the money that households give to social recreational activities of interest. Tribal money is the money the households give to their clans. It was measured on scale of: - common, more common and most common.

Assisting impoverish is the cash assistant given to ill impoverished person in the community. It is grouped into likely, more likely and most likely.

## Research Findings

### Descriptive statistics

Approximately fifty-two point four 52.4 % per cents of the (233) sampled heads, were from Juba County. The remaining counties of: - Kejikeji, Morobo, Terekeke and Yei River; each had nearly, 13.3 %, 12.5 %, 5.2 % and 16.6 % percentages. The age groups of respondents' from these counties were on the range of [18-24], [25-31], [32-38], [39-45] and [46-64] years' old. Their frequencies comprised of about 8.2 %, 21.5 %, 19.3 %, 27.04 and % 24% per cents, ref. (table 1 & 2).

Table 1. Frequencies of Counties in (C.E.), South Sudan

C.E counties	Freq.	Percent	Cum.
Juba	122	52.36	52.36
Kejikeji	31	13.3	65.67
Morobo	29	12.45	78.11
Terekeke	12	5.15	83.26
Yei River	39	16.74	100
Total	233	100	

Table 2. Frequencies of Age groups - C. E. State, South Sudan

Age Groups	Freq.	Percent	Cum.
18-24	19	8.15	8.15
25-31	50	21.46	29.61
32-38	45	19.31	48.93
39-45	63	27.04	75.97
46-64	56	24.03	100
Total	233	100	

Donating money to one's community and having faith money more commonly had mean WTP of about 12,272 SSPs. While having social money commonly and donating to one's community, had nearly WTP of: 9,690 SSPs. Likewise, having tribal money most commonly and donating money to one's community, had about WTP of: 12,281 SSPs. Households who are "Most likely" assisting impoverishers, and donating money to their communities, had almost WTP of: 14,637 SSPs, ref. (table 6).

Table 3. Social capital model statistics

Dep. Vars.	mean ( $\mu$ )	$r^2$	$p$ -value	$f$ -value
WTP	5129.5	0.5633	0.0011	F( 70, 106) = 1.93

### Cues to Action

The highest proportion of households who are paying medical costs out of pocket; are the "Most likely" at about 52% per cent then the "More likely" at 28% per cents, ref. (table 3). Three (3) out of the five (5) counties had their average WTP of: [5,464 5,283 5,805] SSPs. The female gender had lower average WTP for social health insurance. Only Juba county, had mean WTP of [5,208] SSPs for the female gender. Similarly, Christians in those (3) counties had WTP, of [5,538 5,964 5,801]. On the other hand, Muslims had (2) counties with mean WTP, of [9,000 17,500]. Households with no education had scored higher mean WTP than households who had completed their education levels, ref. (table 4 & 5).

Table 4. Proportion Paying Medical Costs, C.E. State, South Sudan

Proportion estimation			Number of obs. 85	
Paying medical	Proportion	Std. Err.	[95% Conf. Interval]	
Likely	0.20	0.04	0.11	0.29
More likely	0.28	0.05	0.18	0.38
Most likely	0.52	0.05	0.41	0.63

Table 5. Means and Standard deviations of WTP for Social health insurance by Counties

	<b>Juba</b>	<b>Morobo</b>	<b>Kejikeji</b>	<b>Terekeke</b>	<b>Yei River</b>
Variables	mean ( $\mu$ )	mean ( $\mu$ )	mean ( $\mu$ )	mean ( $\mu$ )	mean ( $\mu$ )
Dep. Var (WTP)	<b>5,464</b>		<b>5,465</b>		<b>5,456</b>
	9,36.3		1,916.6		1,322.5
Female	<b>5,208</b>				
	5,832				
Male		<b>5,696</b>			<b>6,456</b>



		10,438			8,193
Christian	5,538	5,964			5,801
	10,195	10,233			7,886
Islam			9,000	17,500	
			-	-	
Other	8,500		6,000	.	
Bachelor	6,360		5,622	6,733	
	11,768		7,407	5,658	
Diploma	8,007				12,531
	14,205				15,512
Master's					6,375
					7,955
None		12,820		13,000	
		19,079		6,364	
Secondary					6,514
					6,136
<i>Lump sum pay</i>		16,667		.	.
		25,841		.	.
<i>Salary</i>	5,640				5,507
	10,538				7,709
<i>Wages</i>				13,000	5,210
				6,364	3,645

Table 6. Means, Standard deviations of Kind money against (Faith, Social, Tribal) money & Assisting impoverishers

Faith money	ChurchMosque	Community	None	Social club	The poor
Common		6,741		9,050	
		11,753		10,346	
More common		12,272			5,662
		25,596			10,803
Most common		8,490	8,500		
		10,253	-		
Social money					
Common		9,690			
		17,048			
More common		9,157	6,313	5,188	
		12,210	2,625	3,424	
Most common				7,825	9,483
				10,948	16,330
Tribal money					
Common				6,813	
				11,502	
More common			5,150		5,680
			4,045		10,861
Most common		12,281			
		18,653			
Total		8,029			
Assist impoverish					
Likely		14,637			
		29,613			
More like		6,123			5,335
		12,254			6,307
Most like		8,508	7,500	6,250	
		9,237	3,536	1,768	

### Inferential statistics

The (5) counties of C. E., are WTP about 5,129.5 SSPs on average. This average is equivalent to \$ 43.5 USD, per annum. The explanatory variables of this research, are able to explain 55.3% per cent of this mean WTP for social health insurance. The achieved mean is statistically very significant at {F (70, 106) = 1.93 and p-value = 0.0011 of the 5% per cent confidence}, ref. (table 6; fig. 1). This finding is consistent with (Donfouet, Essombe, Mahieu, & Malin, 2011; Tundui & Macha, 2014; Ko, Kim, Yoon, & Kim, 2018) survey study on Nepalese households.

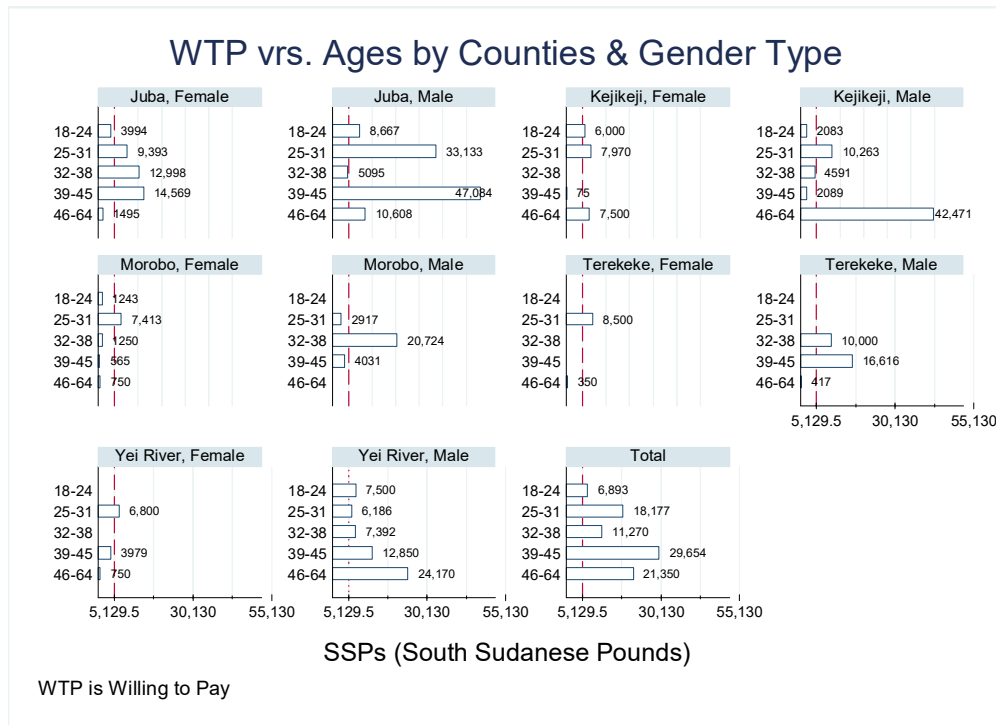


Figure 1. Average WTP of Age groups by Counties, South Sudan

## Discussion

Households, and the sample tribes among the (5) counties of C. E. state, have less barrier to social health insurance (Polyzou, Jones, Evangelinos, & Halvadakis, 2011). Among the Bari speakers, assisting ill-impooverished person / s at the most likely levels, is statistically significant ( $p\text{-value} = 0.03$ ); under the 5% per cent confidence mark. This coincides with statements from the chiefs that, “assisting strangers among the tribes are part of their norms”.

Moslems had wider margin in their mean WTP than Christians and other denominations. As a results, self-efficacy among the religious groups had over shadowed income barrier to social solidarity. This finding is consistent with (Kumakawa, 2017) that altruism induces WTP for SHI.

These findings showed the cognitive shifts in Moslems of believing in better health through the orthodox insurance; rather than their past believes that any insurance is similar to gambling. Islam used to view health as unpredictable event and insurance agents are profiting (Anonymous, 2001) on the invested capital.

Social capital leads to perceived collective benefits; likewise, the insurance domain. Baldwin (1911) remarked that community theory, "is used in psychology and logic for the commonness or coincidence, of different individuals. In social mode of learning, psychological processes start to form when there is unity among individuals' thoughts, morals, beliefs and etc. "What drives the individual in society are the norms and social value acquired from his or her society as common knowledge, not private," (Ibid, p.67).

Community empowerment a theme from the chiefs; showed that it is an enabler. Individuals and communities take care of their social responsibilities and health is an example (Israel, Checkoway, Schulz, & Zimmerman, 1994). Social health insurance can ease the lives of the high proportions of households in C.E. state, who are incurring out of pocket medical bills.

## **Conclusions**

The new understanding is that assisting impoverishers builds up one's social capital (Donfouet & Mahieu, 2012). Households from formal and informal sectors were WTP an equivalent of \$ 43.5 dollars per annum for funding SHI in C.E. State, South Sudan. Social capital cues households to willingly pay for social health insurance (Ko, Kim, Yoon, & Kim, 2018). Community solidarity recreates social capital and thus households were willing to pay for social health insurance (Mladovsky, Soors, Ndiaye, Ndiaye, & Criel, 2014). The expected behavior of wanting healthy body upon income productivity and longevity in life were cognitively achieved through the benefits of social capital.

According to individual theory, households from the (5) counties of C. E. are willing to pay for social health insurance. Individuals are rational and a set and a pattern of behavior do exist that leads to organization theory. As such, the differences in monthly income explains variation in mean WTP. From organizational perspectives, social capital is an enabler to funding health care in C. E. State, South Sudan.

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