A Systematic Review of Factors Affecting Uptake of Health Insurance in the Informal Sector in Lusaka Province, Zambia

Article by Nkomba Chamileke
Texila American University
E-mail: nchamileke@gmail.com

Abstract

The current Social Health Insurance (SHI) model as implemented in Zambia has focused on those in formal employment. This may not favor the SHI model as currently implemented in the Zambian health sector due to extremely low proportion of those employed in the formal sector especially that the current model does not include financial contribution from the informal sector. The paper therefore conducts a systematic review of factors that would be associated with sustainable prepayment in the informal sector. The study was a quantitative cross-sectional study. Multivariate logistic regression was performed to identify factors associated with sustainable prepayment. A total of 426 respondents were interviewed in the study and 56.8 percent were female and 43.2 percent were female. The study revealed that 37.1 percent of respondents supported the idea of making contributions to raise funds for health. 75 percent of those interviewed disagreed that the monthly premium was a good way to collect contributions. The results of the multivariate analysis found that showed that from the factors studied, the one that were associated with sustainable prepayment of health services were higher number of children(OR,0.1;p<0.05),monthly income above 1000 (OR,0.1;p<0.05),monthly expenditure on health needs above K1000(OR,37.6; p<0.05)and nature of business. Those in the nonfood business were more likely to sustainably prepay than those in food business (OR, 2.2; p<0.05). The study recommended expanded coverage through involvement of local and revenue authorities in the collection of levies and reducing high premium costs associated with insurance contributions.

Keywords: informal sector; health prepayment; insurance; contributory; non-contributory.

Introduction

The current Social Health Insurance (SHI) model as implemented in Zambia has focused on those in formal employment. One of the biggest challenges facing many low and middle-income countries (LMIC) is in providing coverage for people outside the formal employment sector. According to Central Statistical Office (Zambia Labor Force report,2012), those in formal employment amounts to only 20.4 percent of those employed who in this case are the population contributing to the social health insurance leaving out the vast majority of individuals who are in the informal sector. This may not favor the SHI model as currently implemented in the Zambian health sector due to extremely low proportion of those employed in the formal sector especially that the current model does not include financial contribution from the informal sector.

The government proposed the National Health Insurance Scheme(NHIS) in 2015 to supplement the tax based and donor based system (Chitalu, 2018), which was based on the solidarity Model of health insurance which refers to equal treatment of all social groups anchored on a contributory mechanism based on mandatory contribution of all working citizens(Deka,2018) .This culminated in the National Health Insurance Act of 2018 which mandated that all citizens both in formal employment and self-employed would be required to contribute a proportion of the income.

There still seems to be no consensus on the best way forward because of the many

challenges peculiar to the informal sector group. Enabling contributions in the informal sector towards quality health care provision is a complex and unresolved issue and the contributions can bring accountability at local level, but is likely to carry high administrative costs as contributions can be costly to collect compared with the revenue people in the informal sector generate (Cooksey, 2018).

There is need to look at whether the informal can make a sustainable contribution to health prepayment and which type of insurance would be suitable for a country like Zambia where the proportion of the population in informal sector is high.

This paper therefore analyzes whether the informal sector can provide a sustainable contribution to the health prepayment by describing the social demographic characteristics of the informal sector, elicits views from the informal sector as to whether there is preference for a contributory versus non-contributory approach, identifying factors that would be used in determining factors associated with sustainable prepayment in the informal sector.

Methodology

The study was conducted in two sites, Chongwe district with a population of 141,301 and Lusaka district with a population of 1,747,152 both situated in Lusaka Province (CSO, 2010). Chongwe is predominantly a rural committee with agriculture as the main activity while Lusaka district is mainly an urban setting with most in the informal sector in trading, artisan and other semi-skilled jobs (CSO, 2010). The study sites in Lusaka district included all 5 zones of the district. These included Kanyama, Matero, Chawama, Chestone and Chilenje.

The study design was a quantitative cross-sectional study on the health sector prepayment mechanism of the informal sector. The sampling method was multistage sampling was used to select the study population in the selected areas.

The independent variables included age, educational status, number of children, gender, marital status, nature of business, monthly expenditure on health needs, number of employees and monthly income. These categories of the independent variables were coded starting from zero to make it appropriate for further analysis using logistic regression methods. The outcome variable was sustainable health insurance prepayment. The time that the individual was able to run their business was taken as a proxy for the sustainability of the income and consequently of sustainable health prepayment.

The data was collected using structured one to one questionnaire. Data was analyzed using SPSS 21. To determinate the factors associated with sustainable prepayment of health insurance, logistic regression was done.

Results

A total of 426 participants were recruited in the study to determine factors associated with sustainable prepayment of health sector in the informal sector. Out of these, 56.8 percent were female while the rest were male. The majority of the study participants were aged above 50 years of age who had attained secondary level as their highest level of education as shown in Table 1.

The results indicated in Table 2 that 63.8 percent of those interviewed were in the non-food business while 36.2 were in the food related business. The study revealed that 45 percent had income above 1000 kwacha, while 66 percent had monthly expenditure more than 1000.

The results in Table 3 showed that of those surveyed, 21.4 percent had run business for less than 5 years while 78.6 had run for more than 5years. The study found that the majority of the respondents had run their business for more than 5 years.

The results in Table 4 showed that 37.1 percent of respondents were of the view that insurance contributions to raise funds for health while 64 percent disagreed or strongly disagreed while the rest neither agreed nor disagreed. Further, 75 percent of those interviewed disagreed that the monthly premium was a good way to collect contributions while 40 percent of those interviewed felt that insurance should be based on one's income while 33 percent preferred a fixed contribution while the rest neither agreed nor disagreed.

The study showed in Table 5 that from the factors studied, the one that were associated with sustainable prepayment of health services were number of children, monthly income and nature of business as indicated in Table 7. From the study, those with more children were less likely to contribute sustainably to health services (p <

0.05, OR =0.2). The study showed that people who earned their livelihood from non-food related business were more likely to prepay for health services (OR =3.0, p< 0.05). The study also found those with income greater than 1000 was less likely to prepay for health services. Higher expenditure on health needs was found to be associated with sustainable prepayment (OR=0.1, p<0.05). Those with higher expenditure on health needs were found to be more likely to sustainably prepay for health services (OR =37.6, P<0.05).

Discussion

A total of 426 participants were recruited in the study to determine factors associated with sustainable prepayment of health sector in the informal sector. Out of these, 56.8 percent were female while the rest were male. It was established that the majority of the study participants were aged above 50 years of age who had attained secondary level as their highest level of education. From the study results, it was deduced that the majority of the study participants were married had between one to three children.

This is consistent with studies in similar settings which found that the majority in the informal sector were female (World Bank Report, 2014).

63.8 percent of those interviewed were in the non-food business while 36.2 were in the food related business. 45 percent had income above 1000 kwacha, while 66 percent had monthly expenditure more than 1000. This could be explained that most of the food related business were seasonal and as such, there could have higher preference for non-food business. This result is similar to study by Okungu & Maclintre (2018) which recorded similar findings. The study results conflicts with a study conducted by Musepa (2014) which indicated that the majority of the respondents in a study conducted on insurance reliability in the informal sector stated owned food kind of businesses and the majority of the businesses had more employees.

36 percent of respondents were of the view that insurance contributions to raise funds for health while 64 percent disagreed or strongly disagreed while the rest neither agreed nor disagreed. This could be because health insurance was a new concept and was not fully understood in most African countries(Adewole

et al,2017).The results are in conflict with Zambia Health expenditure and utilization survey (ZHEUS) study which found that 96 percent of the respondents were of the view that health insurance would be beneficial to the population (Deka,2018).75 percent of those interviewed disagreed that the monthly premium was a good way to collect contributions. These could be because of the perceived difficulty in remitting, monitoring and collecting contributions especially that many in the informal sector did not have fixed trading places. These results are similar to studies by Okungu & Mcintyre (2018) and McIntyre and Kutzin (2014) which showed that most of the respondents in that study preferred indirect contributions.

Gumber (2002) reviewed existing health insurance arrangements in India, including ones for informal sector workers. He examined community-based and self-financing programs whose target population was mainly the informal sector, noting that while they were capable of contributing towards the health insurance scheme, most of the members of the public preferred an indirect method of contributing based on the level of income among the respondents. This author reviewed health insurance schemes linked to microcredit initiatives and remarked that a common source of credit default was the cash outlays that households had to make to obtain health care, hence the drive to promote health insurance.

40 percent of those interviewed felt that insurance should be based on one's income while 33 percent preferred a fixed contribution while the rest neither agreed nor disagreed. This is similar to a study by Okungu and Mcintyre (2018) which came up with similar findings.

The study showed that from the factors studied, the one that were associated with sustainable prepayment of health services were number of children, monthly income, monthly expenditure on health needs and nature of business.

From the study, those with more children were less likely to contribute sustainably to health services (p < 0.05, OR =0.2). This could be explained by less disposable income by those with larger families. This is in contrast with the study by Adebayo et al (2015) which found that those with larger family size were more likely to sustainably prepay for health insurance. Another

study by Badu (2018) found that Individuals who had more than 4–6 household size were 2.82 times more likely to have their National Health Insurance Scheme (NHIS) status active compared with those who had less 1–3 household size.

The study showed that people who earned their livelihood from non-food related business were more likely to prepay for health services (OR =3.0, p< 0.05). This could be due to the fact that the most of the farmers in the study grew food in a seasonal manner and hence their flow of income was seasonal, mainly confined to the rainy season when most agriculture produce was grown. These findings are consistent with study by Okungu (2018) who recorded similar findings.

The study also found those with income greater than 1000 was less likely to prepay for health services. This could be explained by the fact those in higher income bracket could have access to private health services or may be more able to afford out of pocket expenditures without depending on insurance to pay for their health costs. The study results are also similar to Akanmbi (2017) who indicated that factors such as social economic status, low level of trust in government social policies, and mistrust of fund management in health insurance schemes, while conflicts with religious and cultural beliefs are common influencers towards poor progress of prepayment schemes in Africa. Electronic media such as radio and television were cited as sources that could enhance the level of awareness of health insurance. Studies have shown that there was a positive correlation between awareness of and participation in a health insurance scheme.

The study also found that higher expenditure on health was associated with sustainable prepayment. This could have arisen due to the fact individuals who spent more on health-related needs could have appreciated the need for health insurance due to the perceived reduction of out of pocket expenditure due to the availability of an insurance scheme. Studies have shown that households with severely limited incomes or resources are associated with increased likelihood of facing financial distress in meeting healthcare payments and hence could benefit more insurance prepayment (Laokri, 2013; Leive 2011).

Conclusion

The study revealed that there is need to place importance on the number of children, monthly income, monthly expenditure on basic needs and nature of business as predictors of sustainable prepayment of health services.

There is need for the stakeholders to make efforts to design and implement health insurance schemes that will incorporate the different strata of the socio-economic groups.

There is need to ensure that insurance contributions are collected as an indirect levy rather than as a direct premium.

There is need to have policies that tailor contributions that vary income based on the monthly income.

There is need to carry out more education on the benefits of insurance as most interviewed felt insurance was most beneficial.

There is need to have programs to support those in the food industry due to its seasonal nature to encourage methods such as irrigation which will ensure adequate cash flow throughout the year to help address the seasonal flow of income.

Figures and tables

Table 1. Demographic characteristics of respondents

Variable	Number	Proportion
Age		
18 to 30	81	19.0
30 to 40	97	22.8
40 to 50	120	28.2
>50	128	30.0
Sex		
Male	184	43.2
female	242	56.8
Educational status		

None	90	21.1	
Primary	148	34.7	
secondary	149	35.0	
Tertiary	39	9.2	
Marital status			
Single	60	14.1	
Married	308	72.3	
widowed	41	9.6	
divorced	17	4.0	
Number of children			
none	53	12.4	
One to three	221	51.9	
More than three	152	35.9	

Table 2. Assessment of nature of financial flow

Variable	Number	Proportion
Nature of Business		
Food	272	63.8
Non food	154	36.2
Number of employees		
One	151	35.4
Two	195	45.8
More than two	80	18.8
Monthly income		
More than 500	136	31.9
500 to 1000	98	23.0
More than 1000	192	45.1
Expenditure on health-related needs		
More than 500	256	60.0
500 to 1000	149	35.0
More than 1000	21	5.9

Table 3. Assessment of sustainability of business

Variable	Number	Proportion
Duration of running business		
Less than 5 years	91	21.4
More than 5 years	335	78.6

Table 4. Perceptions of health insurance and approach to contributions

Item	Number	Proportion	Upper CI	Lower CI
Insurance view				
Strongly agree	69	16.2	16.4	16.1
Agree	89	20.9	21.1	20.7
Neither agree nor disagree	38	8.9	38.1	37.9
Disagree	84	19.7	19.8	19.5
Strongly disagree	146	34.3	34.7	33.9
Contribution preference				
Strongly agree	12	2.8	2.8	2.7
Agree	66	15.5	15.7	15.4
Neither agree nor disagree	25	5.9	5.9	5.8
Disagree	145	34.0	34.3	33.7

Strongly disagree	178	41.8	42.3	41.4
Variation of contribution				
Strongly agree	24	5.6	5.6	5.5
Agree	163	38.3	38.7	37.9
Neither agree nor disagree	97	22.8	23.0	22.5
Disagree	98	23.0	23.3	22.7
Strongly disagree	44	10.3	10.3	10.1

Table 5. Predictors of sustainable prepayment (multivariate analysis)

Variable	Number	Proportion	Odds ratio	P value
Age				
18 to 30	81	19.0	1	
30 to 40	97	22.8	0.8	0.85
40 to 50	120	28.2	0.6	0.39
>50	128	30.0	0.8	0.96
Sex				
Male	184	43.2	1	
female	242	56.8	0.4	0.75
Educational status				
None	90	21.1	1	
Primary	148	34.7	1.1	0.87
secondary	149	35.0	0.5	0.33
Tertiary	39	9.2	0.7	0.42
Marital status				
Single	60	14.1	1	
Married	308	72.3	3.3	0.24
widowed	41	9.6	2.8	0.24
divorced	17	4.0	0.6	0.57
Number of children				
none	53	12.4	1	
One to three	221	51.9	0.1	0.04
More than three	152	35.9	0.2	0.001
Nature of Business				
Food	272	63.8	1	
Non food	154	36.2	2.2	0.01
Number of employees				
One	151	35.4	1	
Two	195	45.8	0.4	0.07
More than two	80	18.8	3.0	0.07
Monthly income				
More than 500	136	31.9	1	
500 to 1000	98	23.0	0.4	0.07
More than 1000	192	45.1	0.1	0.00
Expenditure on health needs				
More than 500	256	60.0	1	
500 to 1000	149	35.0	10.3	0.01
More than 1000	21	5.9	37.6	0.00

Acknowledgements

References

[1]. Adebayo, E.F., Uthman, O.A., Wiysonge, C.S. *et al. (2015),* A systematic review of factors that affect uptake of community-based health insurance in low-income and middle-income countries. *BMC Health Serv Res* 15, 543 https://doi.org/10.1186/s12913-015-1179-3.

[2]. Adewole, P Lohuku, H.E., Fora, M.W., Olepanachi, A.L., Oku, H.E., (2006), An estimation of willingness to pay for county health risk sharing scheme and medical poverty trap; evidence from rural Nigeria, Department of economics, University of Dival, Quebec.

[3]. Akanmbi 2017. Using the National Longitudinal Surveys of Youth (NLSY) to Conduct Life Course Analyses, *Handbook of Life Course Health Development*. Springer, Cha.

[4]. Bargain M and Kwenda C,(2009), *Inequities in financing, coverage, and utilization of health care by informal sector workers, Institute for human development in India* https://www.ncbi.nlm.nih.gov/books/NBK373399/, date accessed 8/02/20.

[5]. Central Statistical office (Zambia), 2010, 2010 Census report, Lusaka, Zambia.

[6]. Chitalu, C 2018, Zambia's National Health Insurance Scheme. *Health Press Zambia Bull. 2018 2(4); pp 5-16*. London School of Hygiene and Tropical Medicine; London, London.

[7]. Cooksey D. 2006. *A review of UK health research funding. Published with the permission of HM Treasury on behalf of the Controller of Her Majesty's Stationery Office. ISBN-10: 0-11-840488-1*.https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228984/0118404881.pdf. Accessed 06 October 2015.viewed8/01/20.

[8]. Deka, B, 2018 The Solidarity Model: Zambia Public Health Scheme 2018 *Health Press Zambia Bull. 20182(4), pp 19-24.*

[9]. Ekman P, 2004 Informal financial transactions and monetary policy in low-income countries: Interpolated informal credit and interest rates in Malawi. *South African Journal of Economic and Management Sciences, [S.l.], v. 21, n. 1, p. 14 pages, apr. 2018*. ISSN 2222-3436.

[10]. Gumber, A. 2002. "*Health Insurance for the Informal Sector: Problems and Prospects.*" In *Working Paper No. 90*. Indian Council for Research on International Economic Relations, New Delhi.

[11]. Kirigia G, 2005, *Removal of user fees in Zambia: was the impact sustained over time?* Institute for human development, India, https://www.ncbi.nlm.nih.gov/books/NBK373399/.

[12]. Laokri S, Weil O, Drabo KM, Dembélé SM, Kafando B, Dujardin B. 2013, *Removal of user fees no guarantee of universal health coverage: observations from Burkina Faso*. Bulletin of the World Health Organization. 2013; 91:277–82. 10.2471/BLT.12.110015.

[13]. Leive A, Xu K.2008, Coping with out-of-pocket health payments: empirical evidence from 15 African countries. Bulletin of the World Health Organization. 2008; 86:849–56C. 10.2471/BLT.07.049403.

[14]. McIntyre D, Kutzin J., (2014), *Guidance on conducting a situation analysis of health financing for universal health coverage.* Geneva: World Health Organisation*; 2014.*

[15]. Okungu, V., Chuma, J., Mulupi, S., & McIntyre, D (2018), Extending coverage to informal sector populations in Kenya: design preferences and implications for financing policy, *BMC Health Services Research, 2018, Volume 18, Number 1, Page.*

[16]. World Bank, (2014), *Annual meetings of the Boards of governors*, Washington Dc, October 2011 to 2014.

[17]. Zambia Labor Force report, 2012, Informal financial transactions and monetary policy in low-income countries: Interpolated informal credit and interest rates in Malawi. *South African Journal of Economic and Management Sciences, [S.l.], v. 21, n. 1, p. 14 pages, apr. 2018*. ISSN 2222-3436.