

## Financial Flow Factors Associated with Sustainable Health Sector Prepayment among the Urban Informal Sector in Lusaka District, Zambia

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

### Abstract

*In 2018, Zambia implemented the Social Health Insurance act as a way of sustainable health care financing and reducing out of pocket expenditures. However, the Social Health Insurance has focused mainly on those in formal employment and has not outlined a clear approach towards the informal sector. A total of 213 research participants were selected in Lusaka district. The study design was a quantitative cross-sectional study and subjects were selected by multistage sampling. The respondents were selected from each of the 5 primary health facility catchment areas from Lusaka district. Multivariate analysis using logistic regression was used to identify financial flow factors associated with sustainable prepayment. The study found that the majority of the respondent were in the non-food business and had run the business for more than 5years. The study found that half of the respondent felt that insurance was beneficial and that contributions should be contributed as an indirect levy. Results of the multivariate analysis found that monthly income greater than K1000 (OR, 0.1,  $p<0.05$ ) and expenditure on health-related needs above K1000 (OR, 44.1,  $P<0.05$ ) was associated with sustainable prepayment. The study concluded that monthly income and expenditure on health needs were sustainable predictors of health sector prepayment among the urban informal sector. 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.*

**Keywords:** health insurance, financial flow, prepayment, sustainable, informal sector, policy.

### Introduction

Globally, Achieving Universal health coverage is a social aspiration for most nations and has been a top health priority for most of the developing countries around the world. Sustainable health care financing is an important issue that affects utilization of health care services. The predominant method of health care financing in most countries was through the use of user fees. However, following the World Health Organization's position to move away from user fees to prepaid expenditures following numerous studies which found that user fees present a barrier to access to curative health services for those groups that would be eligible to pay for them (Robert&Reed,2013; Nimpagaritse & Bertone,2011). Consequently, most countries have moved away from user fees to health care prepayment mechanisms in the

drive to attain universal health coverage (UHC) (Qin etal, 2019).

One of the common methods for health care prepayment is through the use of Social health insurance which requires all working citizens to contribute a proportion of the income towards health care services. Countries with higher social-economic status and a high employment ratio tend to have large social health insurance coverage (Ricardo, 2014).

In most developing countries, the informal sector plays a significant role in employment and income generation, and in economic and social development. Knowledge about the informal sector's size and scope is indispensable for national policy makers, since this may help them design and monitor specific support policies and assistance programs for the informal sector to increase the productive

potential. 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).

The informal sector is highly diverse and its composition varies across countries and within countries. Approaches to mobilizing resources from the informal sector will therefore need to take into account local factors, including the capacity to pay of specific groups and the availability of organizational structures through which its resources can be tapped (Barkan, 2011).

In the informal sector financial flow for health care factors such as Monthly income, monthly expenditure returns, number of employees in an entity and nature of business has been found to be strongly associated with sustainable contributions by the informal sector (Okungu & McIntyre, 2019).

The current Social Health Insurance (SHI) model as implemented in Zambia is mainly focused on 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.

The purpose of this article is to identify financial flow factors that are determinants of sustainable prepayment in the urban informal sector.

## **Material and methods**

The study design was a quantitative cross-sectional study which comprised 213 respondents drawn from five catchment areas in Lusaka district which included Kanyama, Matero, Chawama, Munali and Matero.

The sampling method was multistage sampling. The first stage involved dividing the sample size by the 5 areas to be sampled based on the population in each of the areas. In each of these areas, the sampling was done from the markets in these areas with the market register as the sampling frame. Simple random sampling was then done using the market register.

## **Results**

The results shown in Table 1 indicate that the majority (37.6 percent) of the respondents were aged between 30 to 40 years and that 56 percent were male. The study showed that the majority (62.4 percent) were married and had attained at least a secondary level of education (49.3 percent).

On the financial flow, as indicated in Table 2, 56.8 percent were in the food business while the rest were in the non-food business. 55.4 percent had 2 employees; 43.7 percent had one employee while the rest had more than two. The majority of the respondent had income more than K1000 and had run their business for more than 5 years (Table 3).

Among the respondents, 50 percent agreed or strongly agreed that insurance was a good way to raise money for the health sector while 17.4 percent neither nor disagreed and the rest of the respondents disagreed.

Results of the Multivariate analysis found that Monthly income and expenditure on health needs were sustainable predictors of health sector prepayment among the urban informal sector. The study found that those earning above K1000 were 10 times less likely to prepay as compared to those earning below K500 (OR, 0.1,  $p < 0.05$ ). The study found that those with expenditure on health above K1000 were 42 times (OR 44.1,  $p < 0.05$ ) more likely to prepay for health insurance scheme.

## **Discussion**

Regarding the study results, a total of 213 participants were recruited in the study to determine financial flow factors associated with sustainable prepayment of health sector in the informal sector. Out of these, 56 percent were male while the rest were female. The findings were in conflict with studies in similar settings which found that the majority in the informal sector were female older than 50 (World Bank Report, 2014).

The study also found that 56.8 percent of those interviewed were in the non-food business while 36.2 were in the food related business. It was also revealed that 54.9 percent had income above 1000 Kwacha, while 88.9 percent had

monthly expenditure on health was less than 500. This result is similar to a study by Okungu & Macintyre (2018) which indicated that the majority of the respondents in a study conducted on insurance reliability in the informal sector stated owned nonfood kind of businesses and the majority of the businesses had more employees.

The study found that higher income and higher expenditure on health was associated with sustainable prepayment of health services.

The study found that higher income was negatively associated with sustainable prepayment of health services. This could be due to the fact that many in the high-income brackets could afford out of pocket expenditure and could have access to private insurance and hence may not have appreciated the need for a public insurance scheme. This is contrast with a study by Xiao, 2018 who found that the ability to contribute to the health prepayment can be affected depending on the level of income and that higher income was associated with sustainable prepayment of health services.

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). This could explain why most of the respondents with high expenditure on health needs were more willing to subscribe to an insurance scheme. The household financial contribution to health services funding represents the financial burden due to health

system payments. However, the capacity for a household to contribute to the health systems can be affected by its expenditure attributable to the household through taxes, social security contributions, private insurance, and out-of-pocket payments. These include financial outlays that the household itself is not necessarily aware of paying, such as the share of sales or value-added taxes that governments devote to health. As taxes and social security contributions are rarely earmarked for their ultimate financing purpose, total household payments must be multiplied by the share of these revenues that goes to finance the health system. This puts further strain especially on the low-income families and could result in catastrophic health expenditure (CHE) or constrained access to necessary medical care (Nyabonga,2011).

## **Conclusion**

Results of the Multivariate analysis found that Monthly income and monthly expenditure on health needs were sustainable predictors of health sector prepayment among the urban informal sector.

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 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
<b>Age</b>		
18 to 30	49	23.0
30 to 40	80	37.6
40 to 50	55	25.8
>50	29	13.6
<b>Sex</b>		
Male	114	53.5
female	99	46.5
<b>Educational status</b>		
None	10	4.7
Primary	62	29.1
secondary	105	49.3
Tertiary	36	16.9
<b>Marital status</b>		
Single	43	20.2
Married	133	62.4
widowed	24	11.3
divorced	13	6.1
<b>Number of children</b>		
none	47	23.1
One to three	140	65.7
More than three	26	12.2

**Table 2.** Assessment of nature of financial flow

Variable	Number	Proportion
<b>Nature of Business</b>		
Food	92	43.2
Non food	121	56.8
<b>Number of employees</b>		
one	93	18.8
two	118	26.3
three	2	54.9
<b>Monthly income</b>		
More than 500	40	18.8
500 to 1000	56	26.3
More than 1000	117	54.9
<b>Expenditure on health needs</b>		
More than 500	189	88.7
500 to 1000	20	9.4
More than 1000	4	1.9

**Table 3.** Table showing assessment of sustainability of business

Variable	Number	Proportion (%)
<b>Duration of running business</b>		
Less than 5 years	77	36.2
More than 5 years	136	63.8

**Table 4.** Perceptions of health insurance and approach to contributions

Item	Number	Proportion	Upper CI	Lower CI
<b>Insurance view</b>				
Strongly agree	54	25.4	19.7	31.8
Agree	74	34.7	28.5	41.6
Neither agree nor disagree	37	17.4	12.7	23.2
Disagree	32	15.0	10.6	20.7
Strongly disagree	16	7.5	4.5	12.1
<b>Contribution preference: direct levy</b>				
Strongly agree	7	3.3	1.5	6.9
Agree	57	26.8	21.0	33.0
Neither agree nor disagree	5	2.3	0.8	5.7
Disagree	80	37.6	31.1	44.7
Strongly disagree	84	30.0	32.9	52.4
<b>Variation of contribution</b>				
Strongly agree	3	1.4	0.4	4.4
Agree	114	53.5	46.6	60.3
Neither agree nor disagree	48	22.5	17.2	28.9
Disagree	39	18.3	13.5	24.3
Strongly disagree	9	4.2	2.0	8.1

**Table 5.** Predictors of sustainable prepayment

Variable	Number	Proportion	Odds ratio	P value
<b>Nature of Business</b>				
Food	92	43.2	1	
Non food	121	56.8	1.03	0.99
<b>Number of employees</b>				
one	93	43.7	1	
two	118	55.0	0.15	0.41
three	2	0.9	0.74	0.90
More than two	-	-	-	-
<b>Monthly income</b>				
More than 500	40	18.8	1	
500 to 1000	<b>56</b>	26.3	0.37	0.30
More than 1000	117	54.9	0.10	0.02
<b>Expenditure on health</b>				
Less than 500	189	88.7	1	
500 to 1000	20	9.4	8.29	0.04
More than 1000	4	1.9	44.1	0.01

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