

# **Participation in Social Insurance Programmes: A Gender Perspective from the Mauritian Context**

## **Abstract**

While on the international development policy agenda, social protection may be placed on the top of the list, with the exception of UNIFEM, gender dynamics have received little attention from researchers working on social protection. Though there is strong evidence that men and women experience poverty and vulnerability differently (Chant, 2010), and this is rarely mirrored in social protection programme, strategies and policies. This research paper therefore contributes to the literature by focusing on factors affecting participation in three social protection programmes, namely old age pensions, medical insurance and insurance against work-related injuries from a gender perspective, in Mauritius. The main results emanating from the regressions conducted using data collected from a survey of 246 female workers, reveal that the main hindrances to female participation is low income, lack of awareness, low importance attached to other forms of social insurance other than old age pensions. Among the recommended policies are the need for high-level political will and commitment for mainstreaming gender into social protection policies as well as the requirement for improving awareness and communication by involving women and civil society in public programmes.

## **1.0 Introduction**

According to the International Labour Organisation (ILO) (2000: 29) social security systems are defined as ‘the protection which society provides for its members through a series of public measures.’ Devereux and Sabates-Wheeler (2004) state that the complete range of social protection interventions encompasses protective (to smooth income and consumption, for instance, social assistance programmes), preventive (to prevent deprivation, example, pensions and maternity benefits), promotive (to boost real incomes and capabilities) and transformative (to ensure social equity, inclusion and empowerment) measures. Around the globe, international organisations and national governments in developing countries have started to acknowledge the role of social protection as a tool for poverty reduction and for decreasing vulnerability and social exclusion.

The degree and types of vulnerability and risks faced by women compared to those faced by men differ. As noted by Kabeer and Subramanian (1996) and Kabeer (1998) gender plays an important role in social risks in the sense that risks can be i) gender-specific (social and biological) which hamper involvement in both the labour market and in household livelihood activities; ii) gender-intensified which can result in inequalities in opportunities and resources arising from community or customary norms and finally iii) gender-imposed which arise due to informal cultural beliefs in institutions and lead to discrimination. These gender related risks increase the vulnerability of women. For instance, because the life expectancy of women is longer on average than that of men and women tend to be more conservative investors, the probability that women fall in poverty in their old age is higher than that of men (Ezemenari et al., 2003). Moreover, reproduction and childbearing concerns mainly women and can simultaneously increase risk to their health, interrupt income, and increase expenditure on care. It must be further noted that though they are the most vulnerable ones to social risks, women are the first (and often only) providers of social protection at the household, extended family and community levels, for instance in terms of caring for those suffering from chronic illnesses and HIV/AIDS. Furthermore global adjustments in the labour market, trade liberalization, demographic transitions are all disproportionately leading to

harmful impacts on women, particularly in the informal sector, where majority of women are employed given they are disadvantaged in terms of work opportunities in the formal sector (Sabates-Wheeler and Kabeer, 2003). As noted by Lund and Srinivas (2000), in the informal sector there is a higher incidence of idiosyncratic risks and women usually find it harder to recuperate from repeated shocks.

Social insurance can play an effective role in helping women to avoid/reduce such risks. However, it has been noted that such programmes are slow to adjust to the changing role of women brought by the wake of scientific and technological revolution. As pointed out by ILO (2000), entitlements from social security systems are linked mainly to formal employment which is dominated by male workers. In addition authors like Jackson and Palmer-Jones (1998) state that public works programmes with a heavy manual element negatively discriminate female workers given at different stages of life the physical capacities of men compared to women differ. Empirical work in Bolivia by Stewart and de Geest (1994) reveals that in 1987 only 1% of Emergency Social Fund (ESF) was captured by female workers. In the case of Zimbabwe Sabates-Wheeler and Kabeer (2003), show that the main applicants benefiting from social fund are male ones. Moreover Lund and Srinivas (2000) find that loans from microfinance for women are used for social insurance purposes rather than for setting up of enterprises, confirming the lack of female participation in social insurance.

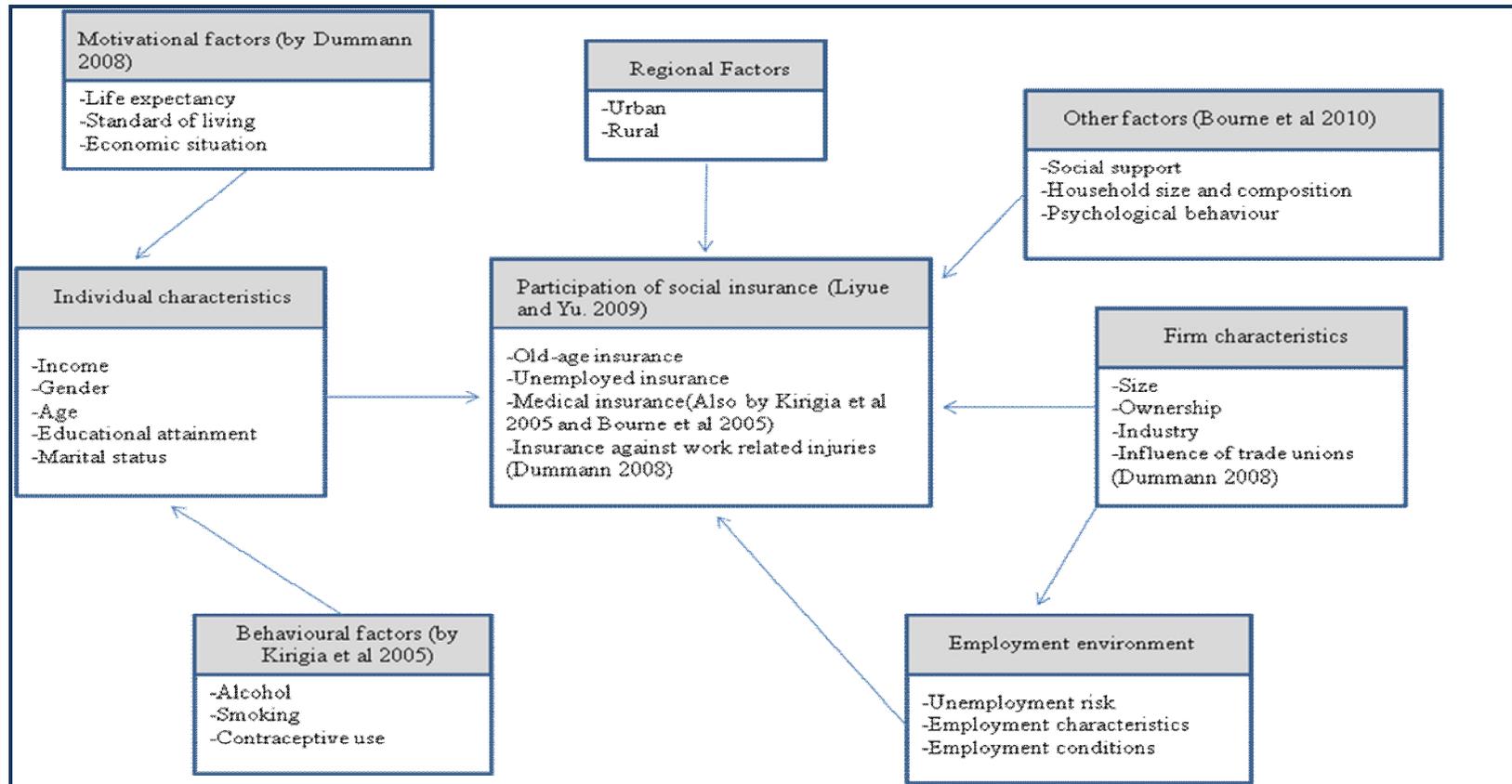
With this background in mind it becomes obvious that there is a need to research into the demand for social insurance by female workers, since their participation depends on factors which differ from those considered by men. This is a hot issue since the UN Millennium Declaration pledges to “combat all forms of violence against women and to implement the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)’ as well as to address’ the equal rights and opportunities of women and men” and only a gender analysis of social security can help in this task and inform appropriate social protection policy and programme responses. Despite the fact that progress on gender equality is acknowledged as a critical factor in achieving the MDGs and it is recognised that one way to achieve equality is through social insurance, investigation on the demand for social security by female workers has not be fully tapped into by researchers. To bridge this gap, this paper uses micro data from 300 female workers in Mauritius, to assess the factors affecting their participation in four types of social insurance programmes namely: Old Age Insurance (both workers and the government contribute), Insurance Against Work-Related injuries (both workers and employers contribute) and Medical Insurance (both workers and employers contribute). The rationale for

using Mauritius, lies in the fact that around 46% of the working population consists of female workers and expenditure on social protection accounts for about 51% of total government expenditure, revealing its importance as a welfare policy and at the same time Mauritius has very often been quoted as “reference by many other countries for its social protection system.”

## **2.0 Model Specification**

Following the work of Liyue and Yu (2009), Lewin Group (2002); Kirigia, et al.(2005); Dumman (2008) and Ahking et al. (2010) the main factors determining the demand for social protection is summarised in figure 1.1.

**Figure 1.1: Holistic View of Factors affecting Demand for Social Protection**



Source: Adapted mainly from the work of Liyue and Yu (2009) and other authors mentioned above.

Based on the factors listed out in figure 1.1 (gender is excluded from our equation as the regressions are run using data from female workers only), the equations for our three types of social protection programmes (Old Age Insurance (OAI), Insurance Against Work-Related injuries (IAWRI) and Medical Insurance (MI)) are given as follows:

$$\begin{aligned}
 OAI_i = & \alpha + \beta_1 age_i + \beta_2 residence_i + \beta_3 marital\ status_i + \beta_4 children_i + \beta_5 \\
 & education_i + \beta_6 income_i + \beta_7 ownership_i + \beta_8 industry_i + \beta_9 firm\ size_i + \beta_{10} trade \\
 & union + \beta_{11} mode\ of\ employment_i + \beta_{12} length\ of\ service_i + \beta_{13} Health_i + \beta_{14} \\
 & Working\ environment_i + u_i \quad \text{----- (Equation 1)}
 \end{aligned}$$

$$\begin{aligned}
 IAWRI_i = & \delta + p_1 age_i + p_2 residence_i + p_3 marital\ status_i + p_4 children_i + p_5 \\
 & education_i + p_6 income_i + p_7 ownership_i + p_8 industry_i + p_9 firm\ size_i + p_{10} trade \\
 & union + p_{11} mode\ of\ employment_i + p_{12} length\ of\ service_i + p_{13} Health_i + p_{14} \\
 & Working\ environment_i + v_i \quad \text{----- (Equation 2)}
 \end{aligned}$$

$$\begin{aligned}
 MI_i = & \kappa + \eta_1 age_i + \eta_2 residence_i + \eta_3 marital\ status_i + \eta_4 children_i + \eta_5 education_i \\
 & + \eta_6 income_i + \eta_7 ownership_i + \eta_8 industry_i + \eta_9 firm\ size_i + \eta_{10} trade\ union + \eta_{11} \\
 & mode\ of\ employment_i + \eta_{12} length\ of\ service_i + \eta_{13} Health_i + \eta_{14} Working \\
 & environment_i + w_i \quad \text{----- (Equation 3)}
 \end{aligned}$$

The dependent variables in each of the three above equations take the value of 1 if individual ‘i’ holds the concerned insurance otherwise takes the value of 0,  $u_i$ ,  $v_i$ ,  $w_i$  are the error terms. Details on the explanatory variables are summarised in table 1.1.

---

**Table1.1 Variables' Description**

---

<b>Variable</b>	<b>Variable Description</b>
Age	0 if 16-30 years, 1 if 31-45 years, 2 if 46-60 years & 3 if 61-65 years
Residence	1 if respondent lives rural and 0 if urban
Marital Status	Dummy being 1 if the respondent is married; 0 otherwise
Children	0 if respondent has no child, 1 if 1 child, 2 if 2 children and 3 if 3 children
Education	0 if primary, 1 if lower secondary, 2 if upper secondary, 3 if vocational, 4 if diploma and 5 if respondent has attended university
Income	0 for respondents with income less than 4000, 1 if 4000 to less than 10000, 2 if 10000 to less than 25000, 3 if 25000 to less than 50000 and 4 if income is 50000 and above
Ownership	Dummy is 1 for private and others while 0 for public
Industry	Dummies used are manufacturing, services and other sectors (1=yes 0=no)
Firm Size	0 for small firms (less than 25), 1 for medium firms (25 to less than 100) and 2 for large-scale firms (greater than 100)
Trade Union	1 if member of trade union, 0 if not a member
Mode of Employment	1 if Full time; 0 otherwise
Length of Service	0 if less than 3 months, 1 if 3months to less than 2years, 2 if 2years to less than 10 years and 3 for 10 years and above
Health	1 if self-rated health concern is excellent and very good; 0 otherwise
Working Environment	1 if respondent feels the working environment or conditions is very risky,risky; 0 otherwise

---

Data is collected through the administration of a survey questionnaire (for details refer to appendix A1). The female working population amounts to 216,200 workers and using the stratified sampling methodology and applying Saunders et al. (2007) formula, we end up with a sample size of 246 workers. A descriptive analysis of the responses received, reveals that most

popular type of social insurance among female workers, is old age insurance. This is explained by the compulsory nature of programmes found in Mauritius. Moreover only 23% of the respondents participate in all the three social insurance programmes. To have further insights, the data obtained is then used to run the three equations, mentioned above, using the Logit methodology.

### 3.0 Research Findings

The results from the logit regressions are summarised in table 1.2.

**Table 1.2: Logit Results**

Independent Variable	Type of Insurance		
	Old-age	Work-related Injuries	Medical
<b>Individual Characteristics</b>			
Age	0.422 [0.382]	0.357 [0.467]	-0.275 [0.396]
Marital Status	0.488 [0.546]	-0.026 [0.967]	-0.104 [0.006]**
Children	0.313 [0.075]**	0.231 [0.030]**	0.532 [0.014]**
Education	0.382 [0.012]**	-0.124 [0.617]	0.072 [0.002]***
Income	1.554 [0.000]***	1.821 [0.000]***	1.900 [0.001]***
<b>Regional Factors</b>			
Residence	-0.026 [0.966]	0.757 [0.160]	-0.215 [0.689]
<b>Firms' Characteristics</b>			
Ownership	0.420 [0.548]	1.101 [0.129]	1.903 [0.003]***
Manufacturing	1.240 [0.157]	-2.268 [0.039]**	-1.197 [0.402]
Services	1.715 [0.013]**	-1.140 [0.054]*	-0.043 [0.941]
Firm size	2.649 [0.000]***	1.536 [0.015]**	0.917 [0.191]
Trade union	0.446 [0.504]	1.007 [0.120]	0.719 [0.192]
<b>Employment Environment</b>			
Mode of employment	1.812 [0.015]**	0.302 [0.724]	0.841 [0.281]
Length of service	1.262 [0.000]***	-0.359 [0.338]	0.678 [0.117]
Health rating	-2.348 [0.004]***	1.242 [0.071]*	4.561 [0.000]***
Employment condition	-0.417 [0.529]	4.740 [0.000]***	1.386 [0.062]*
constant	-11.534 [0.000]***	-9.197 [0.000]***	-15.184 [0.000]***
Number of observations	246	246	246
Wald Chi-square	100.34 [0.000]***	95.83 [0.000]***	66.63 [0.000]***
Pseudo R-square	0.7628	0.7605	0.7196
Log pseudo likelihood	-46.892	-48.709	-57.308

(Notes: values in parentheses are the p-values where \*P<0.10;\*\*P<0.05;\*\*\*P<0.01)

Source: Authors' computation

### **3.1 Individual Characteristics and Regional Factors**

As far as individual characteristics are concerned, the regression results show a positive and statistically significant impact of income on female participation in all the three social insurances. This is consistent with the findings of The Lewin Group (2002), Kirigia et al. (2005) and Dummann (2008). The insignificance of the age coefficient does not support the existing literature (see, for instance, Titelman and Uthoff, 2003; Liyue and Yu, 2009; Ahking et al. 2010) who report a positive and statistically significant coefficients. However it must be noted that these studies included both male and female workers. Being parents, statistically increase female participation in all the three types of social insurance programmes, while marital status has a negative impact on participation in medical insurance. This can be explained by the fact that married female workers may be already covered by the medical insurance of their husbands, while the insignificant impact of this variable on the other two insurance programmes is in line with the findings of Liyue and Yu (2009). The more educated are the female workers, the higher the odds of participating in medical insurance and in old age pension schemes, as expected from the literature (see for instance, Kirigia et al., 2005). In the case of the regional factor, the insignificance of variable residence is justified given the smallness of the island, even if it is true that authors using data from China, Europe, and America have found that people living in urban regions tend to affect demand for social insurances positively. In a small island, the distinction between urban and rural is hardly of any importance since both regions are exposed to same sets of policies and information. In addition, many female rural residents work in the urban region given the ease of moving from one region to another.

### **3.2 Firms' Characteristics**

The findings demonstrate that female workers who are employed in the private sector have a higher odds of participating in medical insurance. This can be justified on the basis that private firms are profit motivated and so would

encourage workers to participate in medical insurance, by partly contributing towards it, as a healthy workforce represents higher productivity and higher profits for the firm. When the private sector is further disaggregated into manufacturing and services, the data show that if respondents are employed in the former sector, then this statistically negatively affect their participation in insurance against work-related injuries. A plausible explanation for this result is that earnings in the manufacturing sector tend to be below the average earnings and as such workers cannot afford to invest in such insurance schemes. Moreover, females employed in the services sector which encompasses sectors such as tourism, finance, education tend to participate more in old-age insurance and lesser in work-related injuries. This is mainly because the nature of work in this industry may be relatively less risky and at the same time the workforce tend to be relatively more skilled and educated and so attach more importance to old pension insurance.

The size of the firm is seen to have a significant and positive effect on old age insurance and work-related injuries insurance. Such results are in line to those of Liyue and Yu (2009) and the rationale put forward is that large firms are more likely to contribute towards such insurance programmes securing their workers compared to smaller sized firms. However as far as participating in medical insurance programme is concerned, firm size does not play a relevant role.

Another interesting result is that trade union membership was an insignificant determinant for female workers' participation in any of the three social insurance programmes surveyed. This is against the literature since as mentioned by Dummann (2008), that being a member of a union increases the capacity and ability to demand that one's social rights be upheld, hence, in turn is expected to have positive impacts on demand for social insurance. However our surprising results can be explained by the fact that in Mauritius very few female workers are members of trade unions and at the same time the main aim of trade unions is to

bargain for higher wages and better working conditions rather than ensuring participation in any form of insurance programmes.

### **3.3 Employment Environment**

As expected from literature, those respondents who are employed on a permanent and pensionable basis as well as those who have longer length of service, are more likely to participate in old age pension schemes. Yet this factor is not relevant for participation in medical insurance, as what matters here is how respondents perceive their health condition in relation to the working environment. The surprising result is that those who perceive their working environment to have excellent and good impact on their health have higher odds of participating in insurance against work-related injuries and medical insurance schemes partly because this gives an indication that the working environment is less risky and the associated premium with such insurance will be low and affordable.

### **4.0 Conclusion and Policy Implications**

Regressions run on data collected from the survey conducted on 246 female workers reveal that some factors are more important for determining participation in one particular insurance programmes, while others are of more significance for other types of social insurance programmes. Yet some factors like income play a crucial role, in all the three types of insurance surveyed. This shows the need for government to encourage female workers at the low income level to participate in such programmes, for instance by subsidising them. The low demand for medical insurance and insurance against work-related injuries, by female workers in general, point out the need educate and create awareness about the benefits of such schemes on long term welfare and human capabilities. One channel of creating awareness is through engaging women in public works programmes and involving civil society organisations or women's organisations/groups that do field work and so, are already in contact with the targeted population.

The findings further reveal that being a member of trade unions does not impact on participation in social protection and as such there is a call to motivate female workers to belong to

organizations which will help them in gaining recognition and in valuing their work, more particularly in the informal sector which is not adequately covered by social insurance programmes.

From a more holistic point of view there is an appeal for high-level political will and commitment for mainstreaming gender into social protection policies and strategies and ensure adequate budgeting. One example is the progress made by OECD countries in developing the Manual for Gender Mainstreaming, Social Inclusion and Social Protection Policies for member states (EC, 2008).

## References

Ahking, F.W, Giaccotto, C. and Santerre R. (2009) The aggregate demand for private health insurance coverage in the US. *Journal of Risk and Insurance*, The American Risk and Insurance Association, 76(2), 133-157.

Chant, S. (2000) 'From 'Woman-blind' to 'Man-kind': should men have more space in gender and development?' *IDS Bulletin* Vol. 31 No 2. April 2000.

Devereux, S. (2002), "Social Protection for the Poor: Lessons from Recent International Experience", Institute of Development Studies (IDS) Working Paper 142, IDS, University of Sussex, Brighton.

Devereux, S. and R. Sabates-Wheeler (2004), "Transformative Social Protection", IDS Working Paper 232, IDS, University of Sussex, Brighton.

Dummann, K. 2008. What Determines Supply and Demand for Occupational Pensions in Germany?. University of Rostock, Germany.

EC (European Commission) (2008), "Manual for Gender Mainstreaming, Social Inclusion and Social Protection Policies", Employment, Social Affairs and Equal Opportunities Directorate, EC, Brussels. <http://ec.europa.eu>.

Ezemenari, K., Chaudhury, N. and Owens, J. (2003) Gender and risk in the design of social protection interventions, Social Protection Discussion Paper Series No 0231, Washington, DC: World Bank.

ILO (1989) World labour report, Geneva: ILO.

ILO (International Labour Organization) (2001), "Trabajo decente para la mujer. Una propuesta de la OIT para acelerar la puesta en práctica de la Plataforma de Acción de Pekín", Geneva.

Jackson, S. and Palmer-Jones, R. (1998) Gender, work intensity and well being, UNRISD Occasional Paper, Geneva: ILO.

Kabeer, N. and Subramanian, R. (1996) The rationale for gender awareness and the policy process in institutions, relations, and outcomes: frameworks and tools for gender aware planning, Discussion Paper No. 357, Brighton: IDS.

Kabeer, N. (1998) Can't buy me love? Re-evaluating gender, credit and empowerment in rural Bangladesh, IDS Discussion Paper No. 363, Brighton: IDS.

Kirigia, J.M., Sambo, L.G., Nganda, B., Mwabu, G.M., Chatora, R. and Mwase, T. (2005) Determinants of health insurance ownership among South African women. BMC Health Services Research, 5(1), 1-17.

Liyue, L. and Yu, Z. 2009. A Multi-Level Analysis on the Determinants of Social Insurance Participation of China's floating population: A Case Study of Six Cities in Fujian Province. School of Geography. Fuzhou: Fujian Normal University.

Lund, F. and S. Srinivas (2000); "Learning from Experience: A Gendered Approach to Social Protection for Workers in the Informal Economy", International Labour Organisation (ILO)- Strategies and Tools against social Exclusion and Poverty (STEP) and Women in Informal Employment Globalizing and Organizing (WIEGO), Geneva.

Modigliani, F. and R. Brumberg. 1955. Utility analysis and the consumption function: an interpretation of cross-section data. In K. K. Kurihara (ed.), Post Keynesian Economics, London: Allen and Unwin, pp. 388-436.

Molyneux, M. (2007), "Change and Continuity in Social Protection in Latin America: Mothers at the Service of the State?" Programme on Gender and Development, Paper No. 1, United Nations Research Institute for Social Development (UNRISD), Geneva.

Pringle, T. 2001. Industrial Unrest in China – A Labour Movement in the Making? Asia Labor Update, Issue No. 40, July-September.

Sabates-Wheeler, R. and Kabeer, N. (2003) Gender equality and the extension of social protection: extension of social security, Geneva: ILO.

Saunders, M., Lewis, P. and Thornhill, A. 2007. Research methods for business students. 4th ed. London: Prentice Hall.

Stewart, F. and de Geest, W. (1994) 'Adjustment and social funds: political panacea or effective poverty reduction?', International Development Centre, Queen Elizabeth House, Oxford.

The Lewin Group (2002) Health insurance coverage in South Dakota: Final report of the state planning grant program. South Dakota Department of Health.

Titelman, D. and Uthoff, A. 2003. The Role of Insurance in Social Protection. CEPAL Review 81, (December 2003), pp 99-117.