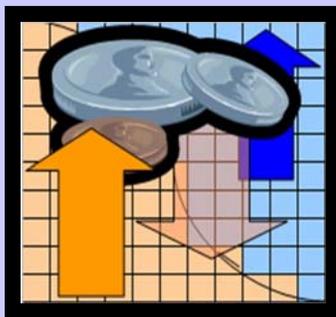




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**Administrative costs  
of health insurance schemes:  
Exploring the reasons for their  
variability**

***DISCUSSION PAPER***

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*Department "Health Systems Financing" (HSF)  
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**Administrative costs  
of health insurance schemes:  
Exploring the reasons for their variability**

*by*

**Emmanuelle Nicolle and Inke Mathauer**



**World Health  
Organization**  
*GENEVA*  
*2010*



**Abstract:**

Although administrative costs are an important spending category to consider in total health insurance expenditure, notably for efficiency concerns, they are often overlooked and so far no overview on health insurance administrative costs exists. This paper aims to provide such an overview for both social security schemes and private health insurance schemes.

A literature review was conducted to retrieve documents on administrative costs of both public and private insurance systems. 76 articles retrieved were drawn on and data from the World Health Organization (WHO) and the Organisation for Economic Cooperation and Development (OECD) was used.

Data is available for 58 countries. It showed important variations between and within countries, which are difficult to interpret or evaluate without knowing what hides behind numbers. Several factors were explored to explain this variation: differing definitions and methodologies applied to assess and report costs, a different range of activities undertaken by insurers, country context, and insurance design aspects. Importantly, lower costs are not necessarily better as administrative efficiency depends on what is being achieved through administrative expenditure.

More detailed reporting of administrative costs would be helpful and encourage efforts of insurers to reach administrative efficiency.

## 1. Introduction

Finding efficient ways to control healthcare expenditure is essential as demand for services keeps increasing while resources are scarce (Mossialos, Dixon, Figueras, & Kutzin, 2002). In this sense, health administration is an important area to consider as it constitutes a prerequisite to any functioning healthcare system. Moreover, with the growing complexity of health systems, administrative costs may easily become a prominent spending category. This is especially the case in health insurance systems where the cost of administration appears higher than in tax-funded systems (Saltman, Busse, & Figueras, 2004; Carrin & Hanvoravongchai, 2002). Moreover, many developing countries are considering mobilizing additional resources through social health insurance (SHI). In order to assess the (financial) feasibility of SHI in these countries, it is equally important to estimate the level of administrative costs (cf. Mathauer, Doetinchem, Kiriga, & Carrin, 2007; Mathauer, Musango, Carrin, & Mthethwa, 2008; Chilombo, Doetinchem, & Kansembe, 2008, Musango et al. 2010). The effort of assessing global costs of scaling up services by the high level task force on health financing equally required estimations on health insurance administrative costs (Mathauer, 2009).

Although administrative costs are an important spending category to consider in total health insurance expenditure, they are often overlooked. More than 15 years ago, Poullier (1992) pointed out that health insurance administrative costs have rarely been a topic for in-depth health financing research or debate outside the US. This is still the case today, as there is neither a comprehensive overview paper available on health insurance administrative costs nor an analysis or comparison of such data across countries. The available literature often only cites specific country data (not necessarily with a given reference) rather than analyze it. This is the case even though countries have undertaken efforts to collect such data, though most often in aggregated format. The enhance data collection has been stimulated by the national health accounts work.

This paper aims to provide an overview of administrative costs of health insurance, including both social security schemes (SSS) and private health insurance (PHI). Social security schemes to cover health care related expenses are mandated by law; they are defined as covering the whole or a large part of the population and generally they are based on mandatory contributions by employees and/or employers (WHO, 2003). PHI is understood as "social protection schemes that are not controlled by the government in its role of public authority" (WHO, 2003). The purpose of this paper is to get a better understanding of what administrative costs are, what they include, and the level of administrative expenditure across countries. Start-up costs of health insurance, i.e. setting up insurance administration, although important, are beyond the scope of this paper (cf. Mathauer, 2009).

A literature search for English and French documents was carried out in Pubmed, Embase and Google. The following terms were used: "health insurance" AND "administrative costs", "administration costs", "admin costs", "operating costs", "transaction costs", "management costs", "administrative overhead", "administrative efficiency".

Consequently, 79 articles retrieved were drawn on with information and/or data on administrative costs. Most importantly, data from the World Health Organization (WHO) National Health Accounts (NHAs) and the Organisation for Economic Cooperation and Development (OECD) System of Health Accounts (SHAs) (OECD, 2000) were used.

In the next section, we will examine definition and reporting issues of administrative costs, followed by a methodology section (Section 3). Section 4 presents and analyses the data retrieved. The reasons that may explain the considerable variance found in the administrative costs data are explored in Section 5. This leads us to a discussion on administrative efficiency in Section 6. Section 7 provides a conclusion.

## **2. Definition and reporting issues of health insurance administrative costs**

The general core cost ingredients of administration include staff costs (e.g., salaries, training), buildings and equipment, information technology (IT) soft and hardware, maintenance, utility charges and other operational costs (e.g., paper, printing material). Specifically, insurance theory defines administrative costs as all costs in excess of benefit payments (Folland, Goodman, & Stano, 2007). This is a large definition, which apart from costs resulting from core administrative functions may include profits as well as taxes and reserve payments and could be referred to as "non-benefit costs" (Zycher, 2007). One way of classifying administrative costs is to group them as transaction-related costs (premium collection, claims processing), benefits management (plan design, quality assurance, performance assessments), selling/marketing costs (underwriting, advertising, sales commissions), and regulatory/compliance costs (taxes, reserve requirements) (cf. Thorpe, 1992; Chu & Trapnell, 2003; Merlis, 2009).

In the SHA/NHA framework, health insurance administrative costs are found in the health expenditure classification of "health care function (HC)" and "health provider (HP)":

- HC.7.1.2 "Administration, operation and support of social security funds",
- HC.7.2 "Health administration and health insurance: private",
- HP.6.2 "General administration and insurance - Social security funds",
- HP.6.3 "General administration and insurance - Other social insurance",
- HP.6.4 "General administration and insurance - Other (private) insurance".

The WHO NHAs and OECD SHAs define "health administration and health insurance as activities performed by private insurers and by central, regional and local authorities including social security funds. They include the planning, management, regulation, and collection of funds and handling of claims of the delivery system. This excludes the administration of healthcare providers...". The definition is activity-based, in other words, administrative costs of activities undertaken are considered. Table 1 outlines the range of health insurance activities that incur administrative costs. However, insurers may not always undertake each of the listed activities.

Table 1. Health insurance activities implying administrative costs

Health financing function	Administrative activity
Resource mobilization	Providing information
	Identifying members
	Registering, enrolling members
	Billing, collecting contributions
	Managing exemptions
	Advertising, marketing, selling
Pooling	Underwriting
	Pooling and transferring resources
Purchasing	Managing risk equalization
	Selecting, negotiating with health providers, purchasing, contracting
	Managing accreditations, quality assurance
	Processing claims, paying providers/reimbursing patients
Stewardship and overall management	Care coordination (disease management, gatekeeping...)
	Providing customer services (members, providers) and consumer education
	Appeal mechanisms
	Human resource management including staff training
	Executive management, governing institutions and board supervision
	Policy-making, planning, scheme (re-)design
	Surveillance at all stages: monitoring/enforcement
	Accounting, auditing, reporting, statistics
Actuarial analysis, financial management, budgeting	

Based on: Thorpe, 1992; Normand & Weber, 1994; Mathauer, 2009; Merlis, 2009; Sherlock, 2009

Reserve payments, taxes, fees, commissions, and profits are not explicitly captured by this SHA/NHA activity-based definition. While there is no clear guidance in the NHA or SHA manuals on how to go about these cost items, in practice, however, they are supposed to be included as administrative costs. Thus, depending on its interpretation by organizations that record health insurance administrative costs, reported costs may or may not contain these subcategories.

Moreover, various ways of reporting health insurance administrative costs exist. They are usually reported as a share of total insurance expenditure. In some studies, they are reported as a percentage of expenditures on benefits (claims) only (e.g., Commonwealth Fund, 2009). In other instances, they are reported as a percentage of premiums only or total revenues.

If administrative costs are the same or similar, an insurer with a higher average claim amount per insured will appear to have lower administrative costs, when reported as a share of total expenditure or claims. This argument appears frequently in the US literature around the comparison between Medicare (with higher average claims per person) and PHI (Zycher, 2007; Sherlock, 2009). Likewise, the ratio of administrative costs over total insurance expenditure is affected by cost-containment activities. These may imply additional administrative costs, as they aim to bring down or contain health expenditure. With a smaller denominator, the share of administrative costs in total expenditure increases.

The term "administrative efficiency" regularly appears in the discussion about administrative costs (e.g. Carrin/James 2005), yet an explicit definition is often not

provided. Here, administrative efficiency is understood as the ratio of administrative costs of insurance administrative activities over their outputs and wider benefits. The question related thereto is whether the respective achievements of administrative activities is worth their costs. As such, administrative efficiency can be increased by augmenting outputs of health administration or health financing benefits, as well as by saving administrative costs.

### **3. Data results**

For this study, we focused on the HC classification of NHAs/SHAs and retrieved administrative costs data under HC.7. A total of 82 countries worldwide have released SHA and/or NHA data up to 2007 (WHO 2007), with no additional country in 2008. SHAs are available (online) starting from 1999 for 28 out of 32 OECD countries as well as for two EU countries (Estonia and Slovenia).

Out of the above, 19 OECD/EU countries have a sizeable social security system to cover health care related expenses (with social security funds as a share of government health expenditure equal or above one third), and SHA data for SSS administrative cost is available for 17 countries. For PHI administrative costs, SHA data is available for 24 out of 31 OECD/EU countries that report PHI expenditure. However, no country has complete records for each year over the period of 1999-2007; the average is 4 data points per country.

In addition, for 47 countries, specific NHA data on PHI administrative costs is available from the WHO NHA database from 1995-2008 or from (mostly) online available NHA reports of 48 countries, out of 60 countries with NHA and/or SHA data that report expenditure on private health insurance (PHI as a share of private health expenditure at least equal or above 1%). Furthermore, for 4 low- and middle-income countries, SSS administrative costs data could be retrieved out of the 45 countries with SSS expenditure reported (SSS as a share of government health expenditure at least equal or above 1%) and with one or several NHA reports available. For most countries, at least 3 data points are available (modus), with an average of 5.6 data points per country.

It is also important to note that the OECD SHA and WHO NHA data is not completely identical due to different time points for reporting and updating. The data provided in the literature is mostly based on national statistics as the usual reference and largely reflects the SHA/NHA data.

In total, health insurance administrative cost data is available for a total of 58 countries from the sources indicated earlier. Tables 2 and 3, for public and private schemes respectively, summarize available data on health insurance administrative costs. Graphs 1, 3 and 4 visualize the range of administrative costs of high-, middle- and low-income countries for public and private insurance schemes over 1999-2007. Graphs 2 and 5 present more detailed trends of administrative costs for public and private schemes, respectively, over 2001-2007 for OECD & EU countries.

Table 2. Data for administrative costs of public schemes

Country	SHA /NHA data		Data retrieved from literature		
	% of total insurance expenditure	Years covered	% of total insurance expenditure	Years covered	References (first author listed) <sup>h</sup>
Austria	4.5 - 4.9 <sup>a</sup>	2004-2006	3.7	1995-2000	Saltman, 2004 <sup>i</sup>
Belgium	3.1 - 6.1 <sup>a</sup>	2005-2007	2.5 - 2.8	1998-2003	Corens, 2007
Czech Republic	2.9 - 3.2 <sup>a</sup>	2003-2007			
Estonia	1.1 - 1.9 <sup>a</sup>	2003-2007	0.85 - 1.52	2003-2008	EHIF, 2005, 2007, 2008
France	5.1 - 5.7 <sup>a</sup>	2003-2007	3.5 - 4.1	2003-2008	CNAMTS, 2004, 2009
Germany	5.8 - 6.2 <sup>a</sup>	2001-2007	5.08-5.57 <sup>c</sup> 6.12-6.87 <sup>d</sup>	1993-2000	Bärnighausen, 2002
Hungary	1.5 - 2 <sup>a</sup>	2001-2007	5.24 - 6.3	1990-2001	Mossialos, 2002 Saltman, 2004 <sup>i</sup> Orosz, 2004 <sup>i</sup>
Japan	2.7 - 3.2 <sup>a</sup>	2000-2006	2	2001	Orosz, 2004 <sup>i</sup>
Luxembourg	6.6, 7.0 <sup>a</sup> [0.4 <sup>a</sup> ]	2003, 2005 2004	2.8	2000	Orosz, 2004 <sup>i</sup>
Netherlands	6.6, 7.0 <sup>a</sup>	2003, 2005	6.7	2000	Saltman, 2004 <sup>i</sup>
Netherlands	2.9 - 4.0 <sup>a</sup>	2001-2007	4.4 - 4.9	1990-2000	Saltman, 2004 <sup>i</sup>
Poland	1.2 - 4.7 <sup>a</sup>	1999-2007	4.7	1999	Orosz, 2004 <sup>i</sup>
Republic of Korea	3.4 - 5.0 <sup>a</sup>	2001-2007	4.0 - 11.9	1990-2006	Carrin, 2004 <sup>i</sup> Orosz, 2004 <sup>i</sup> Jeong, 2007 <sup>i</sup> Kwon, 2009
Slovak Republic	3.7 <sup>a</sup>	2005			
Slovenia	2.1 - 3.1 <sup>a</sup>	2003-2007			
Switzerland	5.6 - 6.1 <sup>a</sup>	2001-2007	5.0 - 6.1	1990-2001	Orosz, 2004 <sup>i</sup> Saltman, 2004 <sup>i</sup>
Taiwan			2.0 - 2.3	1998-2002	Lu, 2003 Lu, 2007 <sup>i</sup>
			3 <sup>c</sup>	Not specified	Thabrany, 2003 <sup>i</sup>
			3.6 <sup>e,i</sup> 6.8 <sup>e,g</sup>	1999	Woolhandler, 2003
			2 - 5 <sup>e,i</sup>	Not specified	Collins, 2009
United States			2.1 <sup>i</sup> 5.1 <sup>g</sup>	1988	Thorpe, 1992
			2.8 - 3.4 <sup>i</sup> 3 - 5 <sup>g</sup>	2000-2005	Angrisano, 2007 Zycher, 2007
			6.1	2007	Collins, 2009
Bolivia			9.6 - 26.6	1995-1997	Cardenas, 2000
Chile			1.8 - 4.0	1996-1998	Barrientos, 2000 Mossialos, 2002
Costa Rica			1.2	Not specified	Rao, 2005 <sup>i</sup>
Georgia	1.9 - 3.5 <sup>b</sup>	2001-2008	3.6	>1990	Savedoff, 2007
India			21	Not specified	Rao, 2005 <sup>i</sup>
Indonesia			10 - 15	Not specified	Thabrany, 2003 <sup>i</sup>
Malaysia	2.2 <sup>b</sup>	2006			
Mexico	16.9 <sup>a</sup>	2001	16.9	2001	Orosz, 2004 <sup>i</sup>
Moldova			<2	2004-2005	Shishkin, 2005
Thailand			5.28	1994	Tangcharoensathien, 1999
Turkey	2.4 <sup>a</sup>	2000	14.8	2005	Tisayaticom, 2007 <sup>i</sup>
Kenya	[9.8, 57.3 <sup>b</sup> ]	1994, 2001	2.4	2000	Orosz, 2004 <sup>i</sup>
Rwanda	[87.7 <sup>b</sup> ]	2003	25	2004	Hsiao, 2007

<sup>a</sup> SHA data, <sup>b</sup> NHA data, <sup>c</sup> Former West Germany, <sup>d</sup> Former East Germany, <sup>e</sup> Data as % of revenue, <sup>f</sup> Medicare, <sup>g</sup> Medicaid, <sup>h</sup> Unless otherwise specified, referenced as national statistics or internal fund's statistics, <sup>i</sup> Referenced as OECD data, <sup>j</sup> Data not referenced

[ ] : numbers suggest data issues, thus not included in cross-country averages or graphs

Table 3. Data for private health insurance administrative costs

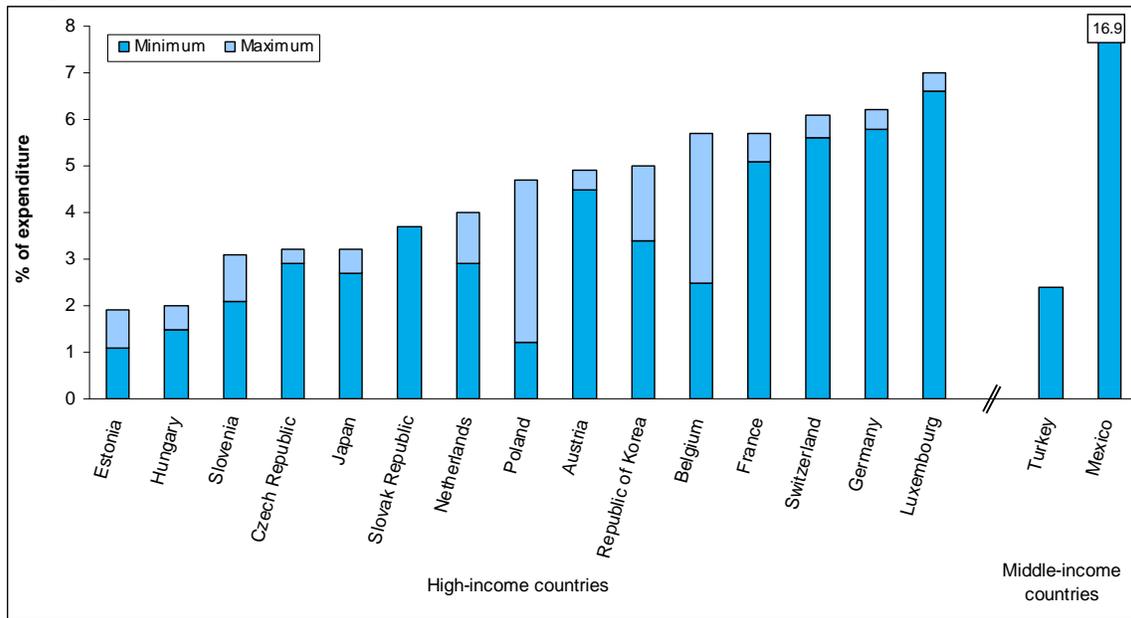
Country	SHA / NHA Data		Data retrieved from literature			
	% of total insurance expenditure	Years covered	% of total insurance expenditure	Years covered	References (first author listed) <sup>d</sup>	
High-income	Australia	9.6 - 14.7 <sup>a</sup> 10.1 - 13.6 <sup>b</sup>	1995-2008 2000-2006	15.8	Not specified	Woolhandler, 2003 <sup>e</sup>
	Austria	19.8 - 30.3 <sup>a</sup> 25.1 - 30.2 <sup>b</sup>	1995-2008 2004-2006			
	Barbados	[20.7 - 22.0 <sup>a</sup> ]	1995-2001			
	Belgium	12.9 - 17.2 <sup>a</sup> 11.8 - 16.9 <sup>b</sup>	2003-2008 2005-2007			
	Canada	12.0 - 17.8 <sup>a</sup> 13.3 - 17.8 <sup>b</sup>	1995-2008 1999-2007	13.2	1999	Woolhandler, 2003 <sup>e</sup>
	Cyprus	1.6 - 4.9 <sup>a</sup>	2003-2008			
	Czech Republic	2.2 - 3.4 <sup>a,b</sup>	2003-2007			
	Denmark	5.8 - 11 <sup>a,b</sup>	2003-2007			
	Estonia	[0.2 <sup>a</sup> ] [0.1, 0.8 <sup>b</sup> ]	2006 2005, 2007			
	Finland	4.5 - 9.1 <sup>a</sup> 5.6 - 7.9 <sup>b</sup>	1995-2008 2003-2007			
	France	19.1 - 21.2 <sup>a</sup> 18.2 - 18.6 <sup>b</sup>	1995-2008 2003-2007	6.9 - 25.1 <sup>c</sup>	2006-2008	Garnero, 2009
	Germany	14.9 - 17.2 <sup>a</sup> 15.0 - 17.2 <sup>b</sup>	1995-2008 2001-2007	16.4 - 17.4 20.4	1992-2001 Not specified	Saltman, 2004 Orosz, 2004 <sup>e</sup> Woolhandler, 2003 <sup>e</sup>
	Hong Kong SAR			21.2	2001	Tin, 2007 <sup>e</sup>
	Hungary	6.6 - 17.4 <sup>a</sup> [0.7, 0.3 <sup>a</sup> ] 9.9 - 17.4 <sup>b</sup>	1998-2008 2000, 2002 2003-2007			
	Ireland			2.0 - 14.2 <sup>c</sup>	1996-1999	Mossialos, 2002
	Japan	[100 <sup>a</sup> ] 12.8 - 16.4 <sup>a,b</sup>	1995-2002 2003-2007			
	Luxembourg	[50.0 - 88.1 <sup>a</sup> ] 4.3 - 4.8 <sup>b</sup>	2000-2008 2003-2005			
	Netherlands	9.5 - 17.7 <sup>a</sup> [0.1 <sup>b</sup> ]	1995-2008 2001	10.4	Not specified	Woolhandler, 2003 <sup>e</sup>
	New Zealand	[70.5, 69.7 <sup>a</sup> ] 4.9 - 5.0 <sup>b</sup>	2007, 2008 2004-2007			
	Oman	19.6 <sup>a</sup>	1998			
	Poland	1.0 - 2.2 <sup>a</sup> 0.9 - 2.2 <sup>b</sup>	2002-2008 1999-2007	2.3	1999	Orosz, 2004 <sup>e</sup>
	Portugal	5.2 - 8.8 <sup>a</sup> 5.1 - 8.6 <sup>b</sup>	2000-2006 2000-2008			
	Republic of Korea	13.1 - 14.5 <sup>a</sup> 14.5 <sup>b</sup>	1995-2008 2003-2007			
	Slovenia	12.7 - 16.2 <sup>a</sup> 12.7 - 16.0 <sup>b</sup>	2003-2008 2003-2007			
	Spain	11.8 - 29.8 <sup>a</sup> 28.3 <sup>b</sup>	1995-2008 2003-2007	14.9	2001	Orosz, 2004 <sup>e</sup>
	Switzerland	11.8 - 22.2 <sup>a</sup> 16.1 - 17.4 <sup>b</sup>	1995-2008 2001-2007	16.1	2001	Orosz, 2004 <sup>e</sup>
	Taiwan			16	1998	Lu, 2007 <sup>e</sup>
	United Kingdom	[47.5 <sup>a</sup> ]	1999	16.9 <sup>c</sup>	1998	Mossialos, 2002

			12.7 (4.5 - 40.9)	1988	Thorpe, 1992 Commonwealth Fund, 2009
	10.7 - 13.8 <sup>a</sup>	1995-2007			
			12.2	2007	Collins, 2009
			6 - 37	Not specified	Matthews, 2006 Chu, 2003
			11.7 <sup>c</sup>	1999	Woolhandler, 2003
United States			10.8 - 14.2 <sup>c</sup>	2000-2005	Zycher, 2007
			16.7 (12.5 - 30.0) <sup>c</sup>	2003	Litow, 2006
	14.1 <sup>b</sup>	2005	9.18 (6.98 - 16.35) <sup>c</sup>	2007	Sherlock, 2009
			5 - 40 <sup>c</sup>	Not specified	Collins, 2009
Bolivia			7	2003-2007	Cardenas, 2000
			18	1996	Barrientos, 2000
Chile			14 - 20	Not specified	Iriart, 2001 Mossialos, 2002 Rao, 2005 <sup>f</sup>
Georgia	6.2, 18.6 <sup>a</sup>	2007, 2008			
Guatemala	23.2 - 37.7 <sup>a</sup>	1998-2000			
India			>30	Not specified	Rao, 2005 <sup>f</sup>
Indonesia			20 <sup>c</sup>	Not specified	Thabrany, 2003 <sup>f</sup>
Jamaica	[7.4 - 11.7 <sup>a</sup> ]	1995-2000			
Lebanon	25.2 <sup>a</sup>	1998			
Middle income			44.1	2006	Ministry of Health, 2008
Malaysia					
	32.3 <sup>b</sup>	2001			
Mexico	19.2 - 33.0 <sup>a</sup>	2001-2007	32	2001	Orosz, 2004 <sup>e</sup>
Namibia	6.5 - 9.8 <sup>a</sup>	2001-2006			
Nicaragua	48.2 <sup>a</sup>	2004			
Sri Lanka	11.9 <sup>a</sup>	2002	6.3	2004	Fernando, 2007 <sup>e</sup>
Suriname			10.6	2006	T&H Group, 2008
Thailand	40.3, 37.8 <sup>a</sup>	2000, 2001	20	1994	Tangcharoensathien, 1999
			34.5	2005	Tisayaticom, 2007 <sup>e</sup>
Tonga	14.1 <sup>a</sup>	2001			
Turkey	26.1, 24.9 <sup>a</sup>	1999, 2000			
	24 <sup>b</sup>	2000	23.9	2000	Orosz, 2004 <sup>e</sup>
Uruguay	[0.1 <sup>a</sup> ]	1997-1998			
Vanuatu	26.1 <sup>a</sup>	2005			
Low income					
Bangladesh	[0.03, 0.05 <sup>a</sup> ]	1999, 2000	53.1	2004	Rabbani, 2007 <sup>e</sup>
Madagascar	38.2 <sup>a</sup>	2003			
Malawi	20 <sup>a</sup>	2006			
Rwanda	[49.6 - 65.5 <sup>a</sup> ]	2002-2004			
Uganda	30 <sup>a</sup>	1997			
Zambia	34.3, 38.8 <sup>a</sup>	2005-2006			

<sup>a</sup> NHA data, <sup>b</sup> SHA data, <sup>c</sup> Data as % of revenue, <sup>d</sup> Unless otherwise specified, referenced as national statistics or internal fund's statistics, <sup>e</sup> Referenced as OECD data, <sup>f</sup> Data not referenced

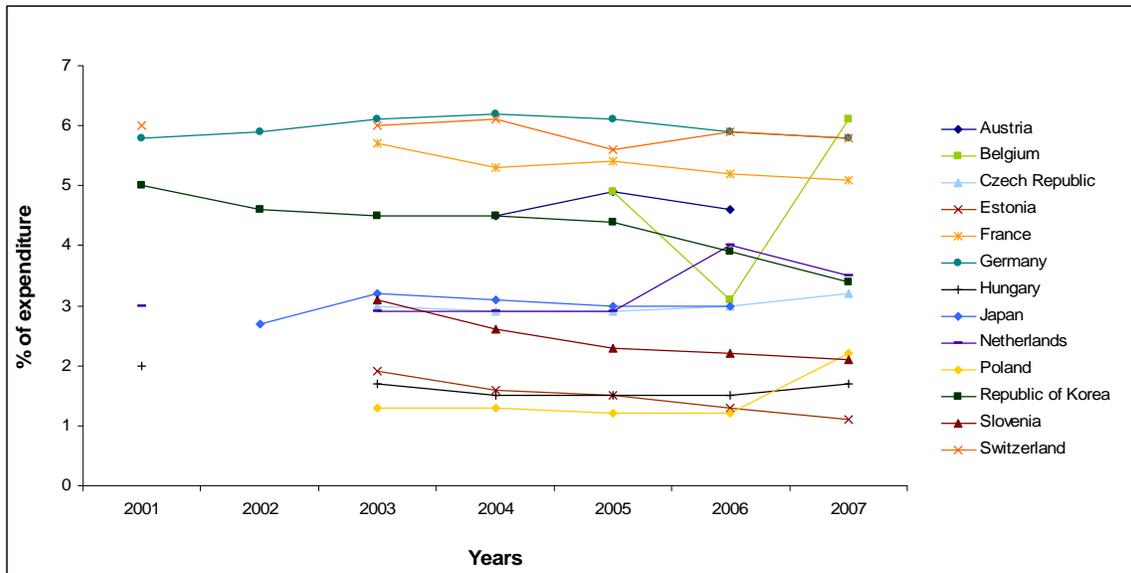
[ ]: These numbers suggest data concerns and are thus not included in cross-country averages or graphs.  
Based on the World Bank country classification (WB 2010).

Graph 1. Public insurance administrative costs over 1999-2007 in OECD & EU countries



Source: SHA data

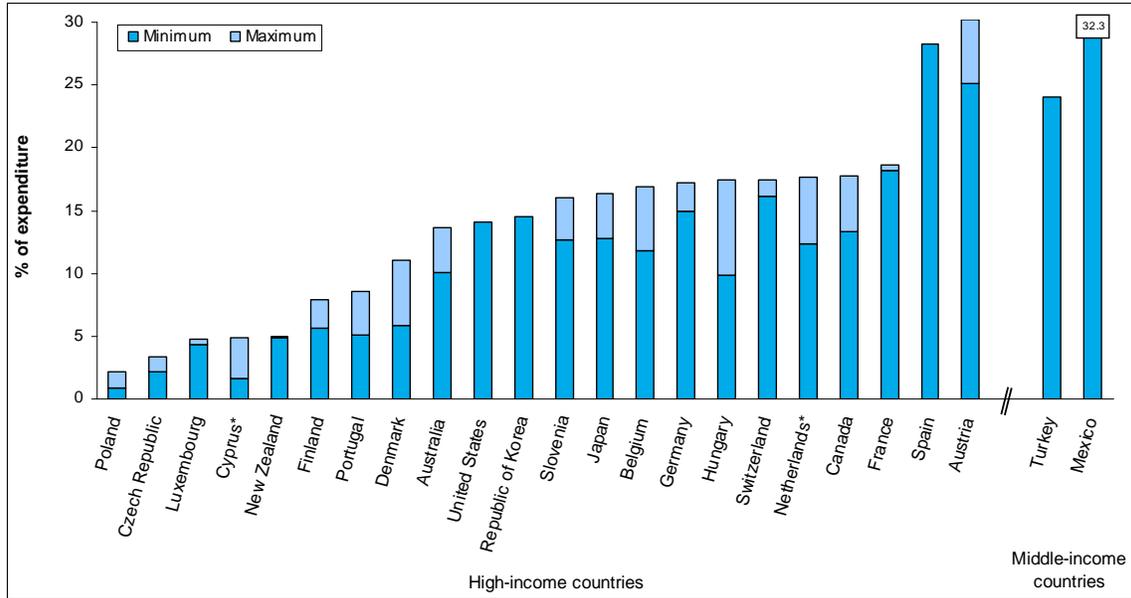
Graph 2. Trend in public insurance administrative costs over 2001-2007 for OECD & EU countries\*\*



Source: SHA data

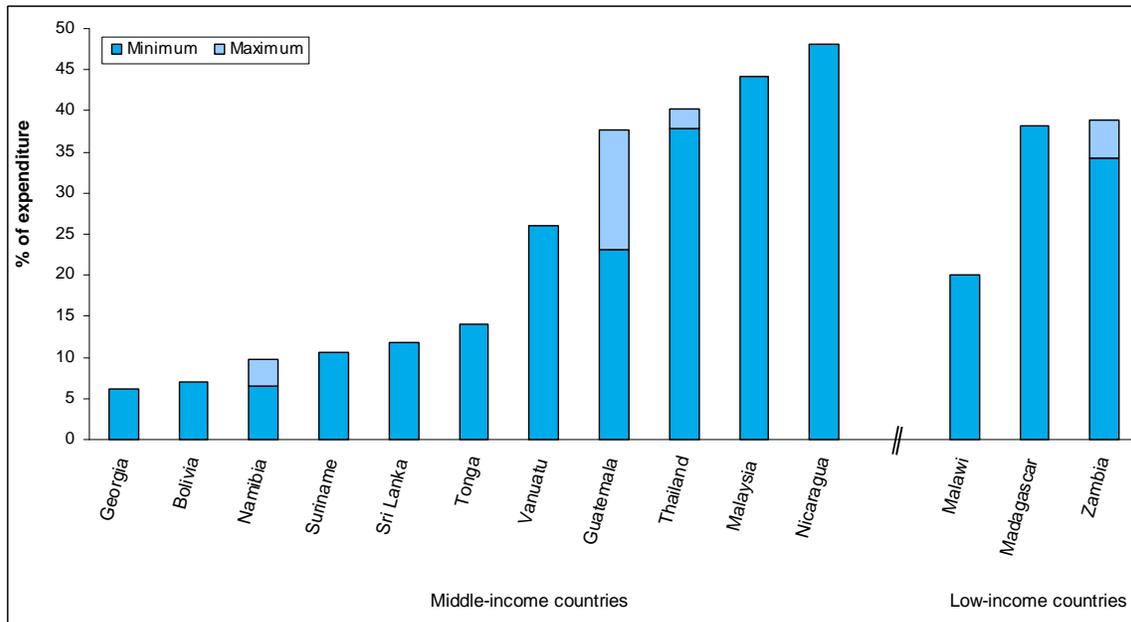
\*\* Countries are included in the graphs if they have at least 2 data points.

Graph 3. Private insurance administrative costs over 1999-2007 in OECD & EU countries



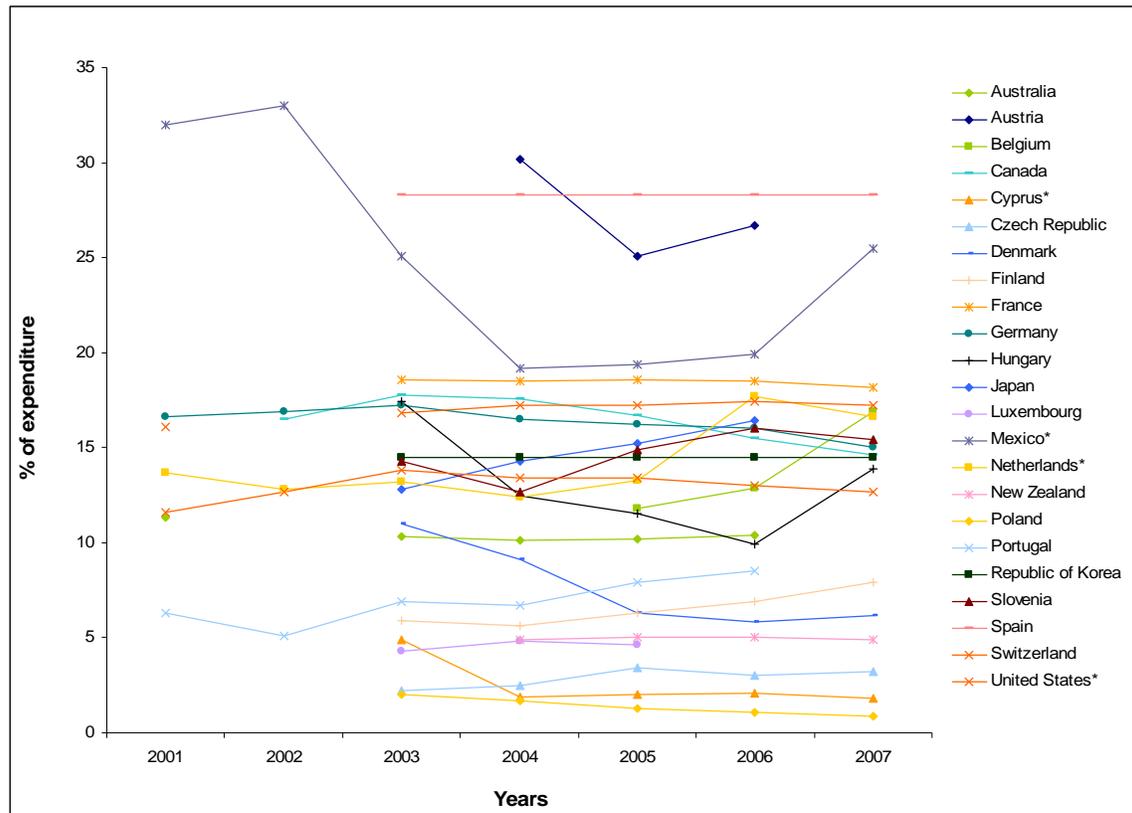
Source: SHA data, \* NHA data

Graph 4. Private insurance administrative costs over 1999-2007 in middle and low-income countries



Source: NHA data

Graph 5. Trend in private insurance administrative costs over 2001-2007 for OECD & EU countries \*\*



Source: SHA data, \* NHA data

\*\* Countries are included in the graphs if they have at least 2 data points.

In the above OECD & EU countries, for SSS schemes, the average administrative costs over 2000-2007 was 4.7% of expenditure (3,8% over high-income countries only), with a minimum average of 1.4% (Poland) and a maximum average of 16.9% (Mexico). There appears to be a slight downward trend in this decade, but with no statistical significance. Yet, the picture seems to be in line with earlier analyses from 1990-1999, where the average administrative costs for insurance-based systems was 4.2%, with a yearly trend of -0.1% over this decade (Carrin & Hanvoravonghai, 2003). Nearly half of the countries experience considerable variance in their administrative costs over the time span; for some others, it cannot be judged for lack of data points (Mexico, Slovak Republic and Turkey have single data points only).

For PHI, the average share of administrative costs in these countries for 2000-2007 was 13.1% of expenditure (11,6% over high-income countries only), with a minimum average of 1.4% (Poland) and a maximum average of 32.3% (Mexico). The PHI administrative costs are thus on average nearly 3 times higher than for public ones. In half of the countries, the share of administrative costs lies between around 10% and 18%. The variance over years is also considerable in many countries with an even less clear trend than for SSS.

For other (non-OECD) middle income and low-income countries, less SHA/NHA data is available, especially regarding SSS (no average could be calculated). Considering all available data, administrative costs range from 1.2% to 26.6%. Some middle-income countries (Chile, Costa Rica, Georgia, Malaysia, Moldova) present low SSS administrative costs, but for other countries (Bolivia, India, Indonesia), they are rather high. Data validity or reliability is questioned for some countries (e.g. Kenya, Rwanda, Bangladesh), when the share of administrative costs is below 1% or above 50%. In Kenya and Rwanda, for example, the large surplus - due to benefit payouts below revenues - is subsumed under administrative costs (NHIF 2005).

For NHA data on PHI over 2000-2007, the average administrative costs is 23.0% of expenditure for middle-income (with a minimum average of 6.2% for Georgia and a maximum average of 48.2% for Nicaragua).

Given the substantial variance in the data, it is difficult to make general statements about the level and trend of health insurance administrative costs. In fact, data interpretation presents a major challenge (cf. Kahn, Kronick, Kreger, & Gans, 2005). As Carrin & Hanvoravongchai (2003) state, "the explanation of differences in administrative costs [...] merit[s] further attention." In the next section, we will therefore explore possible explanations of observed variations in health insurance administrative costs.

#### **4. Explanatory factors for variation in health insurance administrative costs**

The reasons for variance of health insurance administrative costs can be classified into four groups: different methodologies applied, different administrative functions undertaken, country context variables, and insurance design aspects. Each of these explanatory factors points to the need to look beyond numbers. Because of the multitude of factors, it is ultimately difficult to determine and quantify their effects. Thus, straight comparisons of numbers, i.e. shares of administrative costs, are insufficient.

##### Different definitions and methodologies being applied

First, there are differences in definitions, reporting and methodologies actually being applied, in other words: different things are counted, and numbers are reported differently. For example, Kahn et al. (2005) present a study that looks specifically at billing and insurance-related costs among both insurers *and* providers. Matthews (2006) includes all health insurance related activities, whether being undertaken by the insurer or not. This is why his reported costs for the public schemes are much higher than those presented in Table 2. As to reporting, Sherlock (2009), for example, presents administrative costs as percentage of premiums, whereas the Commonwealth Fund (2009) uses percentage of claims. Thus, one should be very cautious with direct comparisons of aggregate numbers across different studies.

Second, discrepancies in methodology exist. As revealed by the methodological information notes for OECD data (OECD, 2009), the definition of health insurance administrative costs is interpreted differently by countries, resulting in different costs being considered for administration. More OECD methodological notes exist and could further

explain discrepancies but they are not publicly available. Anecdotal evidence of OECD/NHA database managers points to inconsistencies even within countries. For example, in one year, public health administrative costs are incorrectly allocated to health insurance administrative costs, while in another year they are not. Reasons could include lack of knowledge and/or staff fluctuations in establishing SHAs/NHAs at country level (personal communication).

In sum, the lack of coherently applying a standard definition and methodology of assessing administrative costs undermines the comparability of estimates. There is thus a clear lack of harmonized data, as also concluded by Carrin & Hanvoravongchai (2003).

#### Different health insurance administrative functions being undertaken

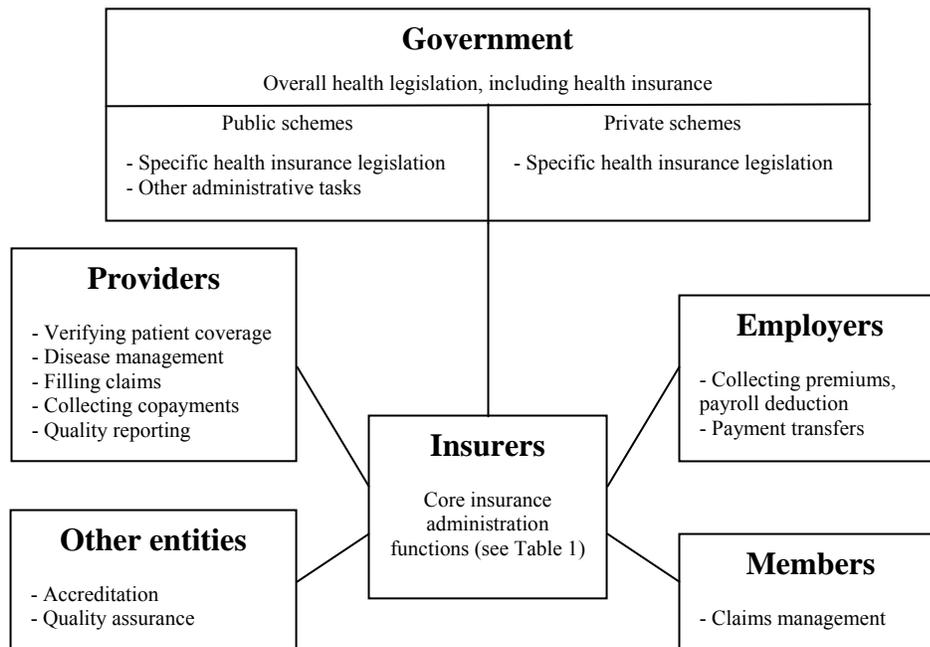
Given the importance of administrative costs in policy discussions, the debate on what should be included or not turns out to be quite contentious, and sometimes ideological, particularly in the US (CMS, 2006; Merlis, 2009; Sherlock, 2009).

Administrative costs measures, as Kahn et al. (2005) point out, "reveal little of component costs [...] and could be misleading". In fact, a key challenge of analyzing and comparing administrative costs relates to the fact that insurers do not all perform the same activities. Apart from core insurance activities, such as member registration, collection of contributions, reimbursement of providers or patients, or financial management, other activities may or may not be performed depending on the insurance system and its legislation. For example, risk equalization, quality assurance, or health technology assessments for cost-effective benefit package definition are not always undertaken, but administrative costs are incurred if they are.

Furthermore, some insurance activities may be mandated by law to another actor like payroll deductions by employers or quality assurance by a third party. Insurers may also (want to) shift certain administrative tasks and hence costs to providers, such as checking insurance membership of patients or utilization reviews. Costs could also be explicitly shifted to patients, as did the French SSS system some 20 years ago by no longer covering postage for reimbursement requests (Poullier, 1992). Likewise, within general government administrative functions, certain activities are related to health insurance administration. As they are not directly carried out by the insurer, their costs are not easily included. Examples comprise tax collection costs for subsidies to SSS or costs related to insurance design specification through legislation. In contrast, the associated costs of policy-making and legislation are usually included in the administrative costs of PHI schemes (Zycher, 2007).

Figure 1 summarizes the various health insurance administration-related activities that may be undertaken by other actors due to legislation or cost-shifting.

Figure 1 - Health insurance administration-related activities of other actors



However, according to the NHA/SHA methodology, costs not directly incurred by the insurance scheme are not to be attributed to it. Some scholars argue that it is problematic to ignore these costs when comparing insurers operating differently, with some performing tasks internally that others carry out externally, such as in broad public/private insurers comparisons (Thorpe, 1992; Lemieux, 2005; Matthews, 2006; Deloitte, 2009; Merlis, 2009; Sherlock, 2009), but also in cross-country comparisons of similar systems (SSS or PHI) or within-country comparisons of different PHI markets (Aaron, 2003; Merlis, 2009).

These concerns relate back to the challenge of defining administrative costs, and again point to the need to look behind numbers for interpretations.

#### Context determinants

Country context determinants also affect health insurance administrative costs. In general, an enabling environment for health insurance would imply lower administrative expenses to set up and manage an insurance scheme, thus resulting in relatively lower routine administrative costs. In contrast, a less conducive context would entail various challenges or bottlenecks for administration; consequently raising associated costs (cf. Devlin, 2007). Table 4 outlines key context factors; for ease of demonstration, the table focuses on non-conductive determinants with an upward effect on costs.

Many context factors constitute bottlenecks to enrolment and collection of contributions, thus requiring more administrative efforts. Such bottlenecks could be cultural, e.g., the insurance concept may not be fully internalized (cf. Normand & Weber, 1994; Rao, 2005),

or the notion of solidarity is limited to one's own community (cf. Carrin & James, 2004). This requires more intense awareness raising and public information.

When potential members are hard to reach (cf. Conn & Walford, 1998; Ensor, 1999) or when their income is difficult to assess (cf. Normand & Weber, 1994; Conn & Walford, 1998; Carrin, 2002; Carrin & James, 2004; Rao, 2005), collection is more challenging. Widespread corruption equally leads to an increase in administrative costs as it calls for intensive monitoring (cf. Hsiao & Shaw, 2007). Lack of administrative capacity, shortages of skilled staff and low staff productivity will also have an upward effect on the level of administrative costs (cf. Normand & Weber, 1994; Carrin & James, 2004). The efficient administration and management of a health insurance scheme is also contingent upon the quality of the leadership and management as well as appropriate level of IT support, like in any company and organization.

Context determinants are difficult to address and influence. Thus, they determine the scope of action for insurance schemes and set the level of administrative costs to be taken into account.

Table 4. Examples of non-conducive context factors with an upward effect on the level of administrative costs

	Context determinant	Reasons for upward effect on level of administrative costs
Geo-graphic	Rural, scattered population	Difficult enrolment and collection of contributions
Economic	Large informal, agricultural, self-employed sectors	Difficult assessment of incomes and collection of contributions, need for monitoring and difficult enforcement process
	Low income level	Less capacity to pay, i.e. lower premiums and lower benefits, while certain level of costs of administration unavoidable; ratio thus less favorable
	Inefficient tax collection system	Difficult collection, more monitoring needed
Govern-mental	Corruption	More monitoring needed
	Culture of opposition	Risk for fraud, complex scheme acceptance, more regulation required
Capacity-related	Low administrative capacity (little experience in insurance and fund management)	Organizational friction and lower organizational productivity; need to build up capacities in planning, accounting, actuarial and legal support
	Insufficient skills	Need for training and skills development
Cultural	Insufficient understanding of the insurance concept	Further awareness raising required
	Low degree of solidarity notion, social cohesion and mutual support beyond the community	Need for information, if voluntary insurance: more advertising and marketing needed, if mandatory: more monitoring needed

Based on: Normand & Weber, 1994; Eichler & Lewis, 2000; Hsiao & Shaw, 2007

### Insurance design aspects

The institutional design of health insurance refers to the set of institutions, or rules, in the form of legal provisions and regulations that prescribe how health insurance undertakes its resource mobilization, pooling and purchasing, thus having direct implications on administrative costs. They are decisive for the functioning and the performance of a health financing system, i.e. the attainment in health financing objectives (Carrin, Mathauer, Xu, & Evans, 2008; Mathauer & Carrin, 2010). Thus, when evaluating the implications of insurance design aspects on administrative costs, it is also important to review their effects in relation to overall health financing objectives, as specified in Table 5.

An exemplary selection of insurance design aspects is presented in Table 5, with an emphasis on design aspects of SSS schemes. The anticipated impact of insurance design aspects on administrative costs and health financing objectives are also outlined. The table draws on various (mostly conceptual) reflections on administrative costs (cf. Normand & Weber, 1994; Carrin & Hanvorachi, 2003).

A first group of insurance design aspects entail higher administrative costs than their respective opposite specification, yet contribute to one or several health financing objectives. For example, income-related insurance contributions, in contrast to flat-rate premiums, contribute to health financing equity, but could create more administrative work. Some design aspects imply additional administrative activities (cf. Table 1) with associated administrative costs, such as for risk equalization, utilization reviews, cost-containment measures, yet they bring substantial value to the system (cf. Bärnighausen & Sauerborn, 2002; Mossialos et al., 2002; Garber & Skinner, 2008).

On the other hand, some insurance design aspects involve additional administrative work, leading to higher costs, but without enhancing health financing objectives. Underwriting, for example, is time- and information-intensive (cf. Minnesota Department of Health, 2007), and ultimately impedes financial risk protection of the sick and vulnerable.

However, some design aspects can entail lower administrative costs, while strongly contributing to health financing objectives. The classic example is single funds, reducing costs through economies of scale, standardized procedures, avoidance of enrolment/disenrolment processes and overall simplified management, while allowing a broader pooling of funds (cf. Normand & Weber, 1994; Jacobs & Goddard, 2000, Mossialos et al., 2002). This seems to be confirmed by the data reported in Table 2. Countries with single-fund schemes, such as Korea, Estonia, Hungary, and Slovenia have lower administrative costs than those with multiple schemes, like Austria, France, Germany and Luxembourg.

In some instances, an insurance design aspect implies administrative work in one area (with an upward effect on the level of administrative costs), but facilitates administration elsewhere (with a downward effect on administrative costs). An example is a capitation payment system. It may increase monitoring costs to avoid under-provision, but on the other hand, it may lower claims management costs. The overall cost effect may thus not be easily predicted without a thorough analysis.

In sum, various insurance design aspects lead to increased administrative costs due to additional administrative steps and processes, more elaborate procedures, data processing, and the need for close monitoring and enforcement (cf. Carrin & Hanvoranchai, 2003). In contrast, certain design aspects create economies of scale and simplify administration, resulting in lower administrative costs.

Table 5. Examples of insurance design aspects with their impact on administrative costs and health financing objectives

Health financing function	Insurance design aspect	Explanation of impact on administrative costs	Impact on administrative costs	Impact on health financing objectives
Collection	Mandatory membership	Monitoring and enforcement required to avoid evasion		RM, EQF, FRP, EF
	Exemptions, subsidies	Regulation, identification of members and enforcement required		EQF, FRP
	Income-related contribution	Need for income assessment, can be administratively complex		RM, EQF, FRP
	Context-adapted revenue collection	E.g. Context-adjusted payment schedules intensify administration		RM, EQF, FRP
Pooling	Risk equalization mechanism	Necessary establishment and management of criteria, system enforcement: complex and data intensive	↑	+ RM, EQF, FRP
Purchasing	Transparent benefit package definition	Necessary technology assessments, cost-efficiency analyses		EF
	Provider payment: performance-based	Complex to set-up and manage		EF
	Gatekeeping	Additional administrative step required		EF
	Income-related cost-sharing maximums	Additional administrative system required		EQF, EF
Stewardship	Patient appeal mechanism	Additional administrative system required		EQF, EF
Collection	Underwriting	Administratively intense		RM, EQF, FRP, EF
	Contribution ceiling, opting-out option	Additional administrative proceedings required	↑	- RM, EQF, FRP, EF
Purchasing	Provider payment: fee-for-service	Complex management of claims, close monitoring required		EF
Pooling	Multiple funds	Duplication of administrative structures, procedures, benefit packages		RM, EQF, FRP, EF
Purchasing	Comprehensive benefit package	Extensive coverage leads to more claims	↑	+ / - EF
	Selective contracting	Individual contracting requires more administration		EF
Purchasing	Provider payment: capitation, diagnostic-related group	Can reduce administration required to process claims but control needed to avoid fraud, underprovision, etc.	↑ / ↓	+ RM, EQF, FRP, EF
	Single fund	Economies of scale, standardized procedures, monopsony power		EF
Pooling	Provider payment: per diem, salary, budget	Simple to manage	↓	+ RM, EQF, FRP, EF
Purchasing	Direct payment of providers	Simpler to manage than reimbursing patients	↓	- EF
Purchasing			↓	+ / - EF

↑/↓ upward/downward effect on administrative costs; +/- positive/negative impact on health financing objectives

Health financing objectives include:

RM: increased resource mobilization

EQF: equity in health financing

FRP: financial risk protection

EF: efficiency

## **5. Administrative efficiency**

As the previous section revealed, lower administrative costs are not necessarily better: undertaking certain administrative tasks associated to specific design choices and with higher administrative costs can be beneficial to the system by contributing to health financing objectives (Thorpe, 1992; Eichler & Lewis, 2000; Kutzin, 2001; WHO, 2006). Thus, administrative expenses should not be judged on the basis of costs alone, but rather on what has been achieved through the use of available resources (cf. Bennett, Creese, & Monasch, 1998), or in other words by the administrative efficiency.

Indeed, improved administrative efficiency could potentially free resources to be used for financing coverage of the uninsured, e.g. in low-income countries (Carrin & Hanvoravongchai, 2003; Kahn et al., 2005). This argument, specifically the shift to public health insurance with supposedly much lower administrative costs, is also made for the US, although fiercely debated due to the different issues we exposed (Aaron, 2003; Himmelstein & Woolhandler, 2003; Woolhandler, Campbell, & Himmelstein, 2004; Kahn et al., 2005; Matthews, 2006; Zycher, 2007; Garber & Skinner, 2008).

Various authors thus propose to undertake a more detailed analysis of administrative efficiency by examining costs of specific insurance administrative activities with respect to their outputs to better evaluate the implications of possible alternatives (cf. Thorpe, 1992; Normand & Weber, 1994; Kutzin, 2001; Kahn et al., 2005). With such informed analyses, one can identify excessive, unwise and wasteful administrative spending, in one or several administrative functions (cf. Carrin & Hanvoravongchai, 2003), or suboptimal administrative operations, processes and proceedings. It is then possible to optimize administrative efficiency by addressing these weaknesses.

In several countries, a rising concern over administrative efficiency can be observed. In Germany and Switzerland, the assessment of administrative efficiency is now a priority in management audits (Maarse, Paulus, & Kuiper, 2005). In Belgium, part of the administration budget for individual funds is fixed, whereas another part is variable depending on the assessed performance in administrative efficiency (Carrin & Hanvoravongchai, 2003; Maarse et al., 2005).

Apart from organizational capacity strengthening measures, including the need to find the optimal degree of investment (e.g., the right number and skill mix of staff members), improvement measures to optimize health insurance administration usually relate to IT advances, accelerating and streamlining administrative processes (cf. Schwefel 2004). Accordingly, Maarse et al. (2005) relate administrative efficiency to “the speed and correctness of administrative procedures...”. Several (US) studies point to the gains through the use of uniform electronic transactions (billing, service coding) or electronic medical records, which increases output while reducing administrative costs per claim (Collins et al., 2009; Merlis, 2009; Minnesota Department of Health, 2007).

Another instrument are (performance) management contracts with clear objectives on administrative spending and outputs like in Costa Rica (Abramson, 2001 in Savedoff & Gottret, 2008) or in Kenya. Such contracts aim to sharpen the managers' focus on

efficient management. Budget caps or targets for administrative expenditure are another measure to control administrative costs, like applied in the Philippines (Hsiao & Shaw, 2007) or in Estonia. The Estonian fund has kept its administrative costs consistently below 2% of expenditure since it was created in 2001 (Savedoff & Gottret, 2008).

Detailed public reporting on administrative costs may be another means to contain costs. Indeed, Savedoff & Gottret (2008) suggest that the requirement to report and justify administrative costs in Estonia (cf. EHIF, 2005) could play a role in keeping them low. Public reporting could also increase the interest of insurance organizations towards administrative costs and encourage them to perform better, especially if benchmarks are made available (Commonwealth Fund, 2009; Devlin, 2007).

## **6. Conclusion**

This paper revealed the difficulties around assessing health insurance administrative costs and the problems in comparing them. Defining administrative costs itself is a first challenge, which is further complicated by different reporting and assessment methods. Also, data availability is of concern in many countries, particularly in middle- and income countries.

The overview of available data revealed considerable variance across and within countries, with no absolute trend. For SSS schemes in high-income OECD countries, the average administrative costs is 4%, with a maximum of 7.0%. This could be considered as a long-term target for low- and middle income countries (cf. Carrin/James 2005). PHI administrative costs are on average nearly three times higher than for SSS. In addition to limited risk and income sharing of PHI, their much higher administrative costs are another disadvantage.

The variation found called for further explanation and different factors were explored. These included differing definitions and/or methodologies applied, different reporting as well as different administrative activities undertaken by insurers. Furthermore, certain country context determinants raise the level of administrative costs. Finally, the insurance design itself affects administrative costs, some of which with an upward, others with a downward impact.

For these reasons, direct comparisons and interpretations of aggregate measures are difficult with too many factors to consider. Ultimately there is need to look beyond aggregate numbers. Nonetheless, when similar methodologies are applied, similar health insurance administration functions undertaken and when schemes are part of a similar health system context as well as wider country context, administrative costs become more comparable within similar country groups.

Indeed, this analysis also revealed that it is not only the level of administrative costs that matters but what is being achieved through administrative expenditure. The aim is not to lower administrative costs by all means, but to optimize the use of resources to reach administrative efficiency.

More detailed administrative cost data, with information on what is included or not in reported costs, for example in NHA/SHA country reports, would therefore be beneficial. The ongoing efforts to review NHA classifications, with a particular focus on balancing out revenues and expenditure via deficits/surplus indications, is an important and useful step to shed light on the black box of health insurance administrative costs. Thus, countries could undertake a more detailed reporting of health insurance administrative costs, separating these into "pure" administrative costs, surplus or deficit, reserve and tax payments. Such detailed reporting of administrative activities and costs would result in more informative benchmarks that could encourage targeted efforts of insurers to improve efficiency. It would also help inform social health insurance financial feasibility assessments.

The study of health insurance administrative costs deserves further attention. There is more literature available in other languages, and above all there are more issues to explore in this area: administrative costs could be further assessed, for example, as per insured, in relation to GDP, in monetary amounts rather than shares, in relation to insurees per insurance staff. Analyzing the increase in administrative costs versus the increase in healthcare costs may equally be insightful, particularly in low and middle-income countries. With better data availability, the effect of cost determinants could be further analyzed. Another important explanatory factor to explore are health system specificities with some of the following questions: Does the the level of total PHI expenditure in the considered health system and the level of competition affect its administrative costs? What is the effect of health sector reforms? Do SSS, run as for-profit organizations have higher administrative cost shares than those operating as not-for-profit organizations? Are the relatively higher administrative costs in low- and middle income countries a matter of low expenditure on benefits, or do they hide other non-insurance related expenditure items?

In conclusion, each system is unique and optimizing administrative efficiency of health insurance implies finding a context-adapted approach. Ultimately, the search for administrative efficiency should contribute to using available resources as efficiently as possible without detrimenting quality care, thereby releasing funds to expand coverage in population and benefits.

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