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Master Thesis

High-level bureaucrat compensation in the United Nations

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Master Thesis

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Contents

Abstract

This thesis studies agency problems in the United Nations and how these agency problems are characterised. Two models of agency problems are studied; career concerns, and pay-for-performance. This thesis finds that contractors concern for a future contract works as an incentive to exert effort driving down leave. The United Nations Staff are not incentivised in this manner. This thesis concludes that United Nations is affected by agency problems and it is likely that these agency problems are characterised by career concerns.

Abbreviations

FAO	Food and Agriculture Organisation
IAEA	International Atomic Energy Agency
ICAO	International Civil Aviation Organisation
IFAD	International Fund for Agricultural Development
ILO	International Labour Organisation
IMF	International Monetary Fund
IMO	International Maritime Organisation
IOM	International Organisation for Migration
ITC	International Trade Centre
ITU	International Telecommunication Union
OPCW	Organisation for the Prohibition of Chemical Weapons
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Program
UNCTAD	United Nations Conference on Trade and Development

UNESCO	United Nations Education, Scientific and Cultural Organisation
UNEP	United Nations Environment Program
UNFPA	United Nations Populations Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Funds
UNIDO	United Nations Industrial Development Organisation
UNISDR	United Nations Office for Disaster Reduction
UNOCD	United Nations Office on Drugs and Crime
UNOPS	United Nations Office for Project Services
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
UNwomen	UN Women
UNWTO	World Tourism Organisation
UN-Habitat	United Nations Human Settlements Program
UPU	Universal Postal Union
WBG	World Bank Group
WFP	World Food Program

WHO   World Health Organisation

WIPO   World Intellectual Property Organisation

WMO   World Meteorological Organisation

1. Introduction

The United Nations is tasked with solving the largest problems of the 21st century, be they climate change, extreme poverty, antibiotic resistant bacteria, world hunger, international conflicts, intellectual property rights and many more. Working to solve these issues are thousands of bureaucrats employed within the United Nations system of specialised agencies, programmes and funds.

This thesis was motivated by an idea: Are there agency problems in the UN? And if so, how do these agency problems affect the United Nations? How does the United Nations address them?

Inquiry into this field has uncovered that very little research has been done on the governance of supranational organisations. For some this may seem natural, after all, traditionally bureaucrats have been viewed as having strong intrinsic motivations and weak monetary incentives, Prendergast (2007). Yet, this need not be the case, some public choice theorists such as Niskansen (1975) and Mueller (2003) argue that bureaucrats are self-interest maximisers who aim to advance their goals by fostering the growth of their organisation. This argument must then imply that there is a mismatch between the incentives of the principal and the incentives of the agent. This could indicate that agency considerations are present in non-profit organisations.

1.1 Research area and scope

This master thesis seeks to investigate the salary and remuneration structure for top bureaucrats compensated through the United Nations common system of salaries, allowances and benefits.

Congruent to the corporate finance literature this thesis looks for evidence of agency problems in the compensation of high-level bureaucrats in the United Nations. A discrepancy between studying agency considerations in for-profit companies and studying them in the United Nations is that there is no evidence that the United Nations Common System utilizes an explicit pay-for-performance structure of compensation i.e. the United Nations does not utilize a bonus scheme.

Although some of the specialized agencies record the performance of the employees this information does not affect remuneration.

Therefore, this thesis chooses to investigate whether possible agency considerations in the United Nations are characterized by Career Concerns i.e. if the bureaucrats own career concerns work as an implicit incentive motivating the bureaucrat to exert effort. This research will be conducted by studying the sick leave of United Nations full-time staff compared with United Nations contractors.

Although the main focus of this thesis is on the effect of career concerns on United Nations full-time staff compared to contractors. Pay-for-performance is also investigated. The lack of an obvious performance measure for a supranational organization is a significant complication.

Finding an adequate performance measure for the United Nations is very challenging. Any findings, and the ability to make assumptions based on these findings, hinge on the quality of the performance measure.

This thesis investigates two possible performance measures. The first being the amount of revenue collected by the United Nations and its affiliated agencies, the second being the United Nations ability to achieve its stated Sustainable Development Goal of eradicating extreme poverty by 2030. A detailed discussion of the performance measures can be found in chapter three theory and hypothesis.

Based on the research area and scope, this thesis poses the following research question:

Is the United Nations affected by agency problems? How are possible agency problems in the United Nations characterized?

If the United Nations does not utilize a bonus scheme, it is necessary to question how bureaucrats at the top level are motivated to exert effort. An answer could be provided by managers own career concerns working as an incentive.

This thesis questions whether

Are high – level bureaucrat´s managerial incentives in the United Nations affected by career concerns?

There is little indication that the United Nations employs a pay-for-performance structure. The publically available information states the United Nations common system does not utilize a bonus scheme. Nonetheless, an implicit pay-for-performance scheme cannot be ruled out without satisfactory evidence. Thus, this thesis questions the following

Is there a pay-for-performance structure in the compensation structure of the United Nations?

To follow this line of questioning, this thesis must address

What is an adequate performance measure for the United Nations?

To study the research questions, this thesis will utilize a two-stage exploratory research design. The first stage will focus on qualitative research including contacting the United Nations, interviewing United Nations staff, and studying United Nations reports. The second stage of research will utilize quantitative techniques to examine the research questions. For a detailed synopsis of the utilized techniques see the methodology chapter.

1.2 Structure of thesis

This thesis is structured into seven main chapters. Chapter two provides a thorough description on the literature and background information relevant to the research process. Chapter three presents and explains the main theories related to the research question. Chapter four describes the way in which the investigation is conducted based on the previous chapters. Chapter five addresses the data used in the investigation to calibrate the theoretical model. Chapter six discusses the results in relation to the theoretical model and the existing literature. Finally, chapter seven presents concluding remarks, implications of the result by affected parties and provides suggestions for future research.

2. Background and literature review

The following literature review summarizes the previous literature on the topic of pay-for-performance, career concerns and other topics relevant to the research area. Furthermore, this chapter provides information necessary to examine the compensation structure of the United Nations as well as the overall structure on the United Nations and its mission.

Although the literature on executive compensation in for – profit firms is extensive, there is very little research done in non-profit firms. Therefore, this thesis amalgamates literature from various fields to create a cohesive understanding of the research question.

2.1 Pay-for-performance

There is very little theoretical literature studying pay-for-performance in non-profit supranational organizations. Therefore, this thesis looks at research done on performance related pay in for-profit corporations. The topic of pay-for-performance is a minefield of heated discussion between academics. There are diverging opinions as to whether pay is linked to performance.

(Loomis, 1982) argues that pay is unrelated to performance. (Henderson & Fredrickson, 1996) and (Sandres & Carpenter, 1998) contend that total pay may be unrelated to performance but it may be related to the organizational complexity that the executives manage. (Murphy, 1985), (Jensen & Murphy, 1990), and (Joskow & Rose, 1994) present similar findings.

However, these views are contradicted by (Gibbson & Murphy, 1990) who present evidence that CEO pay changes by 1.6% for each 10% of return on common stock. In other words, there is a positive and statistically significant link between executive pay and firm performance. Moreover, (Lambert & Larker, 1987) and (Sloan, 1993) postulate that there is a positive relationship between executive pay and performance. What´s more (Blanchard, Lopez-de-Selanes, & Schleifer, 1994), (Iyengar, 2000), (Betrand & Mullainathan, 2001) find that CEO compensation increases when firm profits rise for a reason that have nothing to do

with exerted effort by executives. (Murphy K , 1986) states that executives are worth every penny they earn.

2.2 Executive compensation in non-profit firms and organizations

This thesis hopes to extend the pre-existing literature on executive compensation in non-profit organisations. Although, it has not been possible to find literature on agency problems present in non-profit supranational organizations some research has been done on agency problems in the non-profit sector.

(Cahan, Chua, & Nyamori, 2005) have estimated a positive relationship between executive pay and accounting performance in government-owned trading businesses.

Furthermore, research into agency considerations in the health sector by (Brickley & Van Horn, Managerial incentive in nonprofit organizations: evidence from hospitals., 2002), (Brickley, Van Horn, & Wedig, 2010), and (Ballantine, Forker, & Greenwood, 2008) report an array of findings with evidence suggesting both efficient contracting and rent seeking forces at play.

2.3 Implicit incentives and Career Concerns
Models of career concerns study how an individual's interest in a future career may incentivise that individual to exert effort on the job.

The optimum contract between contracting parties subject to informational asymmetries has been a topic of avid discussion since the 1980s. One school of thought originated by (Fama, 1980) postulates that "the lack of contingent pay doesn´t really matter; the agent´s career concerns will induce him to exert effort." This reasoning argues that moral hazard considerations between the principal and the agent are solved without explicit incentive contracts as the market provides efficient implicit incentive contracts.

(Harris & Holmstrom, 1982) and (Holmstrom, 1999) models career concern in a spot labour market with a sequential signal extraction process by the principal to learn the agent's productivity. Reputational effects induce an agent to exert effort. Furthermore, (Holmstrom, 1999) also finds that the market´s ability to provide efficient implicit incentive contracts is limited by risk-aversion and discounting.

Models of career concerns are defined by a mixture of classical models of adverse selection and moral hazard. With both signalling and hidden actions it implies that there is no explicit boundary between the two asymmetric information models.

2.4 The structure of the United Nations

The United Nations consists of 193 Member states. The United Nations charter consists of the purposes and principles that guide the work and mission of the United Nations. The United Nations is a forum for international discussion and diplomacy as well as a supranational organisation working to address an array of issue challenge humanity in the 21st century.

2.4.1. The UN Charter

The mission and purpose of the United Nations is stated in the United Nations Charter that came into force on the 24th of October 1945. The United Nations Charter states that:

"We the peoples of the United Nations determine to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind, and to reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nation large and small, and to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained, and to promote social progress and better standards of life in larger freedom." - Preamble, The United Nations Charter.

2.4.2. The Main Organs of the United Nations

The main organs of the United Nations are the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice, and the UN Secretariat.

All 193 member states of the United Nations are represented in the General Assembly. This makes it the only UN body with universal representation. The General Assembly is the main policymaking and representative organ of the United Nations.

2.4.3. United Nations Specialised Agencies

The United Nations system is made up of the United Nations itself and 34 funds, programs, and specialised agencies, including UNDP, UNICEF, UNHCR, WFP, UNODC, UNFPA, UNCTAD, UNCTAD, UNEP, UNRWA, UNWomen, UN-Habitat, World Bank, IMF, WHI, UNESCO, ILO, FAO, IFAD, IMO, WMO, WIPO, ICAO, ITU, UNIDO, UPU, UNWTO, UNAIDS, UNISDR, UNOPS, IAEA, WTO, CTBTO, OPCW, and IOM. Each agency has its own membership, leadership and budget. The programs and funds are financed through voluntary contribution, whilst the specialised agencies are financed through voluntary and accessed contributions.

2.5 The Sustainable development goals

The sustainable development goals are a set of 17 goals to end poverty, protect the planet and achieve prosperity for all. (United Nations, u.d.). They were adopted by the United Nations general assembly on the 15th September 2015. The sustainable development goals are not legally binding for the member states, yet all countries are expected to work towards achieving them.

The goals are: 1) No Poverty, 2) Zero Hunger, 3) Good Health and Well-being, 4) Quality Education, 5) Gender Equality, 6) Clean Water and Sanitation, 7) Affordable and Clean Energy, 8) Decent work and Economic Growth, 9) Industry, Innovation and Infrastructure, 10) Reduced Inequalities, 11) Sustainable Cities and Communities, 12) Responsible consumption and production, 13) Climate Action, 14) Life Below Water, 15) Life on Land, 16) Peace, Justice and Strong Institutions, and 17) Partnership for the Goals.

Each of the 17 sustainable development goals has a list of targets that needs to be achieved in order for the overall goals to be achieved. A detailed list of the sustainable development goals and their targets can be found in the appendix.

2.6 The United Nations common system of salaries, allowances and benefits

The information in this section is sourced from (International Civil Service Commission, 2014).

The United Nations has a common system of salaries allowances and benefits that is applied by the United Nations and its funds, programs and most of its

specialized agencies including UNDP, UNFPA, UNOPS, UNHCR, UNICEF, UNRWA, ITC, ILO, FAO, WFP, UNESCO, WHO, ICAO, UPU, ITU, WMO, IMO, WIPO, IFAD, UNIDO, IAEA, UNWomen, ISA, UNAIDS, ITLOS, CTBTO. The International Monetary Fund and the World Bank Group are not part of the common system.

Many of the features of the common system apply to all staff members. Recruitment criteria, salaries, some allowances and structuring of remuneration may differ between two differ groups of groups of staff; professional and higher categories, and the General Service and other locally recruited categories.

2.6.1. The Professional and higher categories

The salary of the professional and higher categories consists of two main elements: base wage and post adjustment. The United Nations determines the wages in the following manner. Staff are paid a gross wage; however, the gross wage is subject to an internal tax called a staff assessment. It is the net wage that United Nations staff receives in cash. Then the post adjustment is applied. The post adjustment insures comparable purchasing power for all duty stations across the globe. The post adjustment also controls for inflation.

The professional and higher categories incorporate five different professional grades (P-1 to P-5), two Director levels (D-1 to D-2).

Increments within the grades are awarded on the basis of satisfactory service. This thesis was not able to find the criterion stating what is "satisfactory service".

2.6.2 Individual contractor agreements

In addition to United Nations staff, the United Nations also utilities a host of contractors employed under an Individual Contractor Agreement (ICA). The individuals employed under an ICA do not have the legal status of a staff member or have the same rights to benefits and remuneration as staff members. (United Nations Development Programme, 2017).

3. Theory and Hypothesis

This chapter presents and examines models to study the research area. First a simplified version of the Holmström-Milgrom linear contracting model to study pay for performance and then a Fama – Holmström productivity model of career concerns. Lastly, this chapter presents a series of hypothesis for testing.

3.1 Incentives driven by career concerns and wages dynamics
The paper by (Harris & Holmström, 1982) postulates a dynamic equilibrium model of long term labour contracts under incomplete but symmetric information over time.

The interpretation of the (Harris & Holmstrom, 1982) model of dynamic wages is relatively unambiguous. Output may influence perceptions about the agent´s talent, as long as ability is unknown. Exerted effort may be a substitute for talent. The agent has the incentive to influence the learning process in his/her favour by exerting effort. Yet, in equilibrium this will not work as the principal will know what effort level to expect and adjust the output measure accordingly. Simply put, in a rat race, the agent is trapped into supplying the equilibrium level of effort expected on him or her, because lower exerted effort will bias the learning process against him or her.

Moreover, in the early career stages the returns of exerting more effort will be higher the more uncertain the market is about ability. When there is little information the principal puts more weight on the most recent output observations when revising its beliefs about the agent´s talent. Per contra, over time the agent´s talent will be almost completely revealed and new observations of output will have little effect on the principal's belief of the agent´s talent.

 In (Holmstrom, 1999) a model is present where *"there are no explicit ouput-contingent contracts, but since the wage in each period is based on expected output and expected output depends on assessed ability, an "implicit contract" links today´s performance to future wages",* This creates an incentive problem. The employee may have a desire and the capacity to influence the learning process and hence the wage process. This could be done by taking unobserved actions that affect today´s performance. Holmström states that *"The fundamental*

incongruity in preferences is between the individual's concern for human capital and the firm's concern for financial returns. The two need only be weekly related".

The (Holmström, 1999) paper makes two propositions. The first is that the reputation process will work more efficiently if the learning process is stochastic or if one can accurately observe output. The second proposition is, in the case that it is expected that information about talent becomes more precise as time goes on, we expect young agents to over exert effort as the return for building a "good" reputation is highest when the market information is diffuse.

3.2 Pay-for-performance

Although there is extensive theoretical literature on principal-agent relationships there have been fewer attempts to apply particular agency-theoretic models directly to data. Largely, because incentive contracts can take many different, complicated forms. (Rosen, 1990) states that since incentive contracts are so dependent on their environment this provides *"very few restriction on the data and makes theory very difficult to apply"*.

The model used to study pay-performance sensitivity is a simplified version of the (Holmstrom & Milgrom, 1987). The model assumes that the optimal incentive contract is a linear function of observable signals of performance. The agent is assumed to have knowledge of current conditions and take actions repeatedly over time. As long as the agent's preferences do not display any form of wealth effects, it is optimal to offer the same reward at each point in time. Therefore, the contract can be assumed to be a linear function of some performance measure. This model is highly useful for empirical studies; however, this comes at the expense of making very strong assumptions about preferences and production technologies.

The goal of this thesis is not to postulate a complete theory of agency and executive pay in non-profit organisations. Also, for simplicity this thesis ignores the link between pay and accounting performance measures such as sales and profits.

This thesis assumes that the bureaucrats in the United Nations work toward a set of goals, exemplified by a performance measure. If achieving this performance

measure is a measure of exerted effort, then by linking the performance measure and wages a bureaucrat can be incentivized to exert effort.

A point of conflict in this model is determining an appropriate performance measure. There is no definite answer to this question, and there may be more than one "correct" answer.

3.3 Hypothesis and testing

This research is an exploratory study to understand principal-agent relationships in the United Nations and how agency considerations are characterized. This thesis looks for evidence of agency problems in two separate sets of theories pay-for-performance and career concerns.

3.3.1 Sick leave

A key prediction of Hölmströms´s original model of career concern is that a bureaucrat´s optimal effort will decline as more is learned of that bureaucrat's ability. This may create a strong incentive to increase effort in the short run because this may influence the United Nations perception of that bureaucrat´s ability. As stated before, this will not hold in equilibrium.

Finding a proxy for effort is challenging. In some ways, a bureaucrat´s use of sick leave is dictated by the strength of that bureaucrat´s own incentives and hence provides a proxy of shirking. However, it is vital to underscore that this is a "noisy" proxy.

Consequently, this thesis finds it more meaningful to study the sick leave patterns of United Nations contractors compared with United Nations full-time employees. The incentive to obtain a new contract with the United Nations will work as an implicit incentive and drive down sick leave. Per contra, United Nations full-time employees will not be incentivized in this manner and have higher sick leave.

Hence, the hypothesis is that:

H_0: There is no difference between the sick leave of United Nations contractors compared to United Nations full-time employees.

3.3.2 Testing pay-for performance

Studying agency considerations in the United Nations the remuneration of the high – level bureaucrats is examined. In a non-profit organization, this is innately challenging as the United Nations lacks an obvious performance measure. Therefore, to test where United Nations wages follow an implicit pay-for-performance structure finding an appropriate performance measure is key.

3.3.2.1 The United Nations budget as a performance measure
A feasible performance measure is the amount of revenue collected by the United Nations and its affiliated agencies. The UN budget is financed by assessed and voluntary contributions from the Member States. The funding of the United Nation could be thought of as a natural 'performance' measure for the services that the United Nations provides. Not to mention, the level of funding is at least partially under the control of the high – level bureaucrats. Diplomats from the respective member states make the final decision, yet the budget and the financing plans are drafted by the bureaucrats. Hence, the bureaucrats are in a position to set the framework for the debate.

Consequently, this thesis hypothesises that:

H_0: There will not be a positive relationship between wages and the United Nations budget

3.3.2.2. Change in extreme poverty as a performance measure
Using the change in extreme poverty as a performance measure may at first seem strange. However, eradicating poverty is a major goal of the United Nations. Ending poverty is the first out of seventeen sustainable development goals. The Sustainable Development Goals have been ratified by the General Assembly consisting of all the United Nations member states. Just as the shareholders of a firm task the management to maximise value for shareholders, the member states have tasked the United Nations to eradicate extreme poverty by 2030. In the same manner as a public firm may using the share price as a performance measure, the change in extreme poverty can be thought of as a performance measure for the United Nations.

H_0: There will not be a negative relationship between wages and the percentage change in extreme poverty.

3.3.2.3. Testing pay-for-performance

H_0: In the United Nations, there is no link between top-level bureaucrat compensation and performance

4. Methodology

This chapter creates a synopsis of the research methodology applied and justifies the selection of research design and the methods used. Moreover, the following chapter reviews the research procedure along with the validity and limitations to the study.

4.1 Research Design

The purpose of the research design is to provide a detailed framework illustrating how the investigation will proceed. In order to address the research question, *"how are managerial incentives in the United Nations affected by career concerns?",* an exploratory research design is evaluated to be the most appropriate.

An exploratory research design aims to ascertain the nature of the problem as well as broaden the understanding of the research question. In R. B. Brown (2006) it is stated that exploratory research "tends to tackle new problems on which little or no previous research has been done"

In this study, the research question studies whether observed pay structures in the United Nations indicate that managerial incentives are affected by career concerns.

By choosing an exploratory research design the study has the benefit of being flexible and adaptive to change. However, caution must be used in drawing any form of determinative conclusions as the information provided by the study may be subject to interpretation which might be contingent on preconceived biases.

4.2 Research Methodology

To adequately study the research question, a blend of qualitative research and quantitative testing is assessed to provide an in – depth understanding of the research question. This methodology is separated into two stages, the first is qualitative research, the second stage is the quantitative research.

4.2.1 Qualitative Research Methodology

All the data to be studied in the second stage of quantitative research comes from the first stage of qualitative research as there are no cohesive databases displaying UN Management data.

The qualitative research was separated into four steps. The first step was to find any interesting documents and reports that could help support the research question and sub-research questions. This was done primarily through the use of GOOGLE, the Dag Hammarskjöld Library, academic databases and journals.

After quickly realizing that very little management information is easily available to the public, contacting the United Nations and its specialized agencies, programs and funds was designed as a second step. Between the 14th and 16th of March 2016, 72 emails were sent to all the United Nations bodies participating in the United Nations Common System of Salaries Allowances and Benefits, as well as to the different United Nations Libraries. Only the library of the International Labour Organization replied. The data and documents that this thesis received was valuable to the research of this thesis.

The third step of the qualitative research was to extract the data that could be used for the quantitative research. This also included studying reports published by the different United Nations organizations about the management of the United Nations.

The last stage of research included contacting different United Nations bodies in the hope of receiving an interview. I was lucky enough to visit the United Nations in New York, receive a tour of the premises, meet with staff, and observe a meeting of the Economic and Social Council. It was interesting; however, the meeting was unfortunately not relevant to this thesis.

4.2.2. Quantitative Research Methodology

4.2.2.1. Career Concerns
Studying Career Concerns is more challenging than testing pay-for-performance, because the United Nations is not transparent on sick leave or the use of Individual Contractor Agreements. Luckily, some data is available, but no enough to make a regression analysis. However, to compare the sick leave of United

Nations contractors and full-time employee descriptive statistics may be sufficient.

4.2.2.2. Pay-for-performance
The first step of understanding pay-for-performance in the United Nations is to get a feel for the available data by studying the descriptive statistics including the means, standard deviation, skewness and kurtosis.

To examine the hypothesis pertaining to pay-for-performance, the correlation between the performance measure in question and the United Nations wages will be studied as well as tested by a t-test.

The correlation analysis will help identify candidate performance measures. These performance measures will be used when building the regression analysis to either support or refute the hypothesizes.

To test whether the United Nations budget is an adequate performance measure of the United Nations, the goal is to run the following wage regression

$$UNwage_{it} = \alpha_0 + \sum_i \beta_i Performance + \varepsilon$$

where the performance measure is the United Nations budget, and ε is an i.i.d. error term.

4.4 Validity
External validity is the ability to generalize beyond the conducted research (Easterby - Smith, Thorpe, & Jackson, 2010). The research is conducted solely on the agency problems of the United Nations. Therefore, it is difficult to extend the findings and make assumptions applicable to all non-profit supranational organizations.

Yet, supranational organizations such as the EU and the AU have similar organizational structures. Naturally, the threat to external validity could have been reduced if the research had included the EU and AU.

Furthermore, this thesis recognizes the limited ability to systematically interpret qualitative data that is collected. Making conclusions based on qualitative data may be subject to human error.

4.5 Limitations

Studying the management of the United Nations is a field that, to the knowledge of the thesis, has not been studied before. There is a limited amount of information available to the public on the management of the United Nations and in general very limited transparency. As a consequence, gathering data and conducting research may be challenging as finding credible and accurate information may be difficult.

The study is also limited by time constraints to only study the agency considerations in the United Nations and not non-profit organizations as a whole.

4.5.1. Pay-for-performance

This thesis chooses only to study the wages of the four top tiers of United Nations employees i.e. the under-secretary general, assistant secretary-general, director level 2, and director level 1. This thesis limits itself to only studying the wages of "executive" bureaucrats, for the study of this thesis "middle-management" is not relevant.

Moreover, the research is also limited by only studying one Sustainable Development Goal as a performance measure. Naturally the other goals are also candidates for a performance measure. The problem is that many of the Goals are difficult to measure or the data difficult to find. The target of eradicating extreme poverty by 2030 is clearly formulated and the data is accessible.

5. Data

Chapter 5 is divided into two sections. Section 5.1 the data on sick leave in the United Nations and section 5.2 presents displays data on pay-for-performance.

There is no single database for internal managerial data on the United Nations available to the public or to researchers. Therefore, all of the data presented in Chapter 5 is collected from United Nations reports. Often, finding and accessing these reports can be tedious. There is no cohesive library on United Nations internal management documents and reports.

Often United Nations reports of relevance are found in the bibliography of other relevant United Nations reports. The United Nations has also been contacted in several ways. Over 70 emails have been sent to United Nations and the participating agencies of the United Nations Common System. The only organization to reply was the International Labor Organization (ILO) which thankfully gave this thesis access to the wage data.

Contacting the United Nations can be a trial. Very few organizations have their telephone numbers publically available. However, the United Nations Office of Oversight Services has a telephone number on its website which is open 24 hours a day. This thesis tried calling the number and unfortunately it did not lead to the United Nations at all but to a dentist office in Manhattan.

5.1 Sick Leave

The data on sick leave is collected from the United Nations Internal Audit and Investigations Group to The United Nations Office for Project Services (UNOPS). The report was published on the 17th of December 2015. The report reviews whether approved leave requests comply with the rules and regulations of UNOPS. The data covers only staff and persons working under Individual Contractor Agreements (ICA) at UNOPS. This report was the only report detailing empirical information on sick leave available to the public at the Dag Hammarskjöld Library.

The table below depicts the annual leave balances of UNOPS – supervised personnel by region as of November 2015.

Region	ICA			Staff		
	2013	2014	2013	2013	2014	2015
Africa	6	6	4	18	17	10
Asia	5	6	6	9	10	10
Europe and Central Asia	4	5	3	9	10	6
HQ	2	3	3	9	12	11
Jerusalem	6	8	6	9	14	11
Latin America and the Caribbean	8	7	3	19	17	7
Middle East	3	7	6	6	13	10
Peace and Security Cluster	9	10	7	10	12	8
Total	5	7	5	11	13	9

Table 1 - Average number of days leave taken per year per capita - not including holiday leave

The table below displays uncertified sick leave that was non-compliant with the rules and regulations of UNOPS and the United Nations Common System. Furthermore, the United Nations Internal Audit and Investigations Groups devised an average daily salary for United Nations staff and ICAs in order to quantify the value of non-compliant sick leave requests during the period between 1st January 2015 to 30th September 2015.

Employee type	Employee salary cost per day as of 2015 (USD)	Unsubstantiated sick leave days identified per capita in 2015	Estimated cost (USD) per capita
ICA	152,17	0,044	6,70
Staff	296,09	0,37	109,55

Table 2 - Estimated value of non-compliant sick leave. 1st January to 30th September 2015 per capita

5.2 Pay-for-performance

The pay-for-performance section is split into three subsections studying wage data, the United Nations budget data, and extreme poverty data.

5.2.1. Wages

The United Nations Common System of Salaries, Allowances and Benefits is regulated and coordinated by the International Civil Service Commission. The Salary and Allowances Division of the International Civil Service Commission Secretariat addresses the appropriate levels of salaries, allowances and benefits of the United Nations Common System staff. The United Nations Common System salary scales are published in the Annual Report of the International Civil Service Commission. The wage data is collected from the Annual Reports of the International Civil Service Commission.

The tables below show descriptive statistics for the wage growth per year for the four top tiers of United Nations staff. Wage growth is studied instead of wage levels as it is assumed that wages are downward sticky. Employees do not like wage cuts.

The wage growth of the four highest tiers of United Nations staff is studied below. The highest tier being under-secretary general (USG), followed by assistant secretary general (ASG), Director level 2 (D-2), and Director level 1(D-1).

The data in the tables is the gross salaries. Furthermore, the net wages are categorized into two groups net wages paid if the employee has dependents (marked with D), and net wages paid if the employee is single (marked with S). The descriptive statistics of net wages can be found in the appendix.

The tables depict the mean wage growth per year, the standard deviation, skewness, and kurtosis.

1991 - 2013	USG Gross	ASG Gross	D-2 Gross	D-1 Gross
Mean	2,02 %	2,05 %	2,10 %	2,29 %
Std. Dev	3,95 %	3,99 %	4,08 %	4,30 %
Skewness	-0,78	-0,77	-0,88	-0,58
Kurtosis	0,12	0,12	0,57	0,59

Table 3 - Wage growth per year for UN under - secretary general, assistant secretary general, director level 2, and director level 1. Sample from 1991 - 2013

5.2.2 The United Nations Budget

The United Nations funding from member states comes from two main sources: assessed contributions and voluntary contributions. United Nations member states are obligated to make the assessed contributions by virtue of their UN membership. The assessed contributions fund the UN regular budget and UN Peacekeeping Operations Budgets. Furthermore, each of the United Nations specialised agencies have their own assessed budgets which the member states are also obligated to finance.

The United Nations Regular Budget finances the core activities of the United Nations. The current payment structure of the assessed contributions to the United Nations regular budgets sets a percentage rate for each member states gross national income based on that nations ability to pay. The current maximum rate is 22% of gross national income and the current minimum rate is 0.001% of gross national income.

The United Nations Peacekeeping Budget is financed in a similar manner as the United Nations regular budget. However, the peacekeeping budget has greater discounts for poorer countries. The budget deficit this incurs is covered by higher rates for the five permanent members of the Security Council. The peacekeeping assessed rates are renegotiated every three years.

The United Nations is also funded through voluntary contributions which is left to the discretion of the member states. The voluntary contributions are vital to the funding of UN humanitarian and development agencies.

The tables below depict the descriptive statistics of the percentage change per year in the total assessed contributions, total voluntary contributions and the total budget. The reason why the percentage changes is used is because the raw data is I(2). A detailed table of the United Nations Budget, which includes the assessed contributions to the UN regular budget, Peacekeeping budget, and UN specialised agencies as well as voluntary contributions to UN specialised agencies, and selected UN programmes can be found in the appendix.

1991 - 2013	Total Assessed Contributions	Total Voluntary Contributions	Total budget
Mean	8,12 %	6,16 %	6,62 %
Std. Dev	15,89 %	7,88 %	8,28 %
Skewness	0,97	0,78	-0,26
Kurtosis	3,86	0,82	-0,11

Table 4 - Descriptive statistics of the percentage change per year in the Total Assessed Contributions, Total Voluntary Contributions and the Total budget. Sample from 1991 – 2013

5.2.3 Extreme poverty data

The first sustainable development goal is to end poverty with the target to eradicate extreme poverty by 2030. The World Bank is the main source for data on global poverty and the bank sets the International Poverty Line. The World Bank revised the International Poverty Line in 2015. A person is considered to live in extreme poverty if he or she lives on less than USD 1.25 or (int. -$) 1.90 per day. The reason that international dollars are used to measure consumption rather than USD is that international dollars capture the monetary value of a person´s consumption. (Roser & Ortiz-Ospina, 2017)

Measuring global poverty can be difficult as price levels vary in different countries. Therefore, the World Bank implements purchasing power parity adjustments. This is because the World Bank's data seeks to capture real material

deprivation, and thus monetary income should be considered in relation to the amount of goods and services that it can buy locally.

The data represented in the figure below shows the share of the population living in extreme poverty, by world region, from 1987 to 2013.

The raw data has a unit root, hence the percentage change of the share of the population living in extreme poverty is studied. A table of the descriptive statistics can be found below.

1991 - 2013	East Asia and Pacific	Europe and Central Asia	Europe and Central Asia	Middle East and North Africa	South Asia	Sub-Saharan Africa	World
Mean	-21,19 %	16,13 %	-8,11 %	-12,74 %	-9,82 %	-2,41 %	-9,98 %
Std. Dev	14,37 %	62,31 %	10,47 %	10,38 %	6,28 %	4,32 %	5,88 %
Skewness	-0,37	2,25	-1,39	-0,65	0,39	0,85	0,48
Kurt	0,97	5,49	3,49	-0,34	-0,81	3,10	-0,45

Table 5 - Descriptive statistics of the percentage change in the share of the population living in extreme poverty, by world region, from 1991 - 2013

Although this data is interesting in its own right and relatively easily assessable through the World Bank's website the purpose of studying the data is to question whether it could be an adequate performance measure of the United Nations.

The data studied in detail must therefore match the United Nations wage data in time frame. Unfortunately, the data sets studying the share of the population living in extreme poverty by world region are incomplete. There are only 11 data points from 1987 – 2013. This makes it very difficult to build a model with any form of significance.

6. Analysis and Results

The analysis and results chapter is divided into five subsections. The first section studies Career Concerns. The second subsection studies the United Nations as a performance measure. The third subsection examines the change in extreme poverty as a performance measure. In the fourth subsection, a regression analysis is used to test pay-for-performance. The last subsection summaries the analysis and results.

6.1 Studying sick leave

The data clearly shows that full-time staff have much more sick leave than individuals working under individual contractor agreements between 2013 and 2015.

The table below displays the average number of days leave per year per capita. This data does not include holiday leave. The employees working under an Individual Contractor Agreements have a systematically lower average number of days leave per year per capita compared to United Nations full time staff. Extraneous effects are dealt with as the data is separated into regional categories, and into a peace and security cluster.

Region	ICA			Staff		
	2013	2014	2013	2013	2014	2015
Africa	6	6	4	18	17	10
Asia	5	6	6	9	10	10
Europe and Central Asia	4	5	3	9	10	6
HQ	2	3	3	9	12	11
Jerusalem	6	8	6	9	14	11
Latin America and the Caribbean	8	7	3	19	17	7

Middle East	3	7	6	6	13	10
Peace and Security Cluster	9	10	7	10	12	8
Total	5	7	5	11	13	9

Table 6 - Average number of days leave taken per year per capita - not including holiday leave

A possible explanation for the difference of sick leave is that contractors are motivated by stronger career concerns due to reputational effects. Individuals employed under an individual contractor agreement do not have the legal status, rights to benefits and remuneration, nor the job security of United Nations staff. The lack of job security motivates the contractor to try to influence perceptions about his or her ability in his or her favor by exerting effort. Exemplified in the data as lower leave. As stated in the theory by (Holmström, 1999), in a rat race the agent is trapped into supplying the equilibrium level of effort expected of him or her, because lower exerted effort will bias the learning process.

The incentive to obtain a new contract with the United Nations will work as an incentive and drive down sick leave. Per contra, United Nations full-time employees will not be incentivized in this manner and have higher leave.

A counter argument could be that the difference in sick leave is due to cross-sectionalities in the data e.g. full-time staff might be sent to more dangerous postings. However, this is accounted for as the sick leave data is separated into regions, as well as into a peace and security cluster. If the difference in sick leave between United Nations staff and contractors is due staff having more hazardous postings, then the sick leave should be equal for staff working in the UNOPS Headquarters in Copenhagen. This is not the case. Contractors at UNOPS HQ had an average of 2 days leave in 2013. UNOPS full-time staff had 9 days leave in 2013. Across the board contractors have considerably lower sick leave than United Nations staff.

This postulation is further supported by the observation that United Nations staff have more unsubstantiated sick leave. The unsubstantiated sick leave may be an indicator of shirking as the employee cannot provide the necessary

documentation. Moreover, the unsubstantiated sick leave of United Nations staff costs more per capita for the United Nations. This may be an indication of agency problems affecting the United Nations and if this were not the case the United Nations would draw no benefit from the efficient contracting.

Employee type	Employee salary cost per day as of 2015 (USD)	Unsubstantiated sick leave days identified per capita in 2015	Estimated cost (USD) per capita
ICA	152,17	0,044	6,70
Staff	296,09	0,37	109,55

Table 7 - Estimated value of non-compliant sick leave. 1st January to 30th September 2015 per capita.

The difference in sick leave between contractors and full-time staff is striking. It is evidence that the United Nations is effected by agency problems and career concerns. In future research, with greater access to data, it would be interesting to study the sick data with controls for age and experience.

6.2 The United Nations Budget as a Performance Measure

The table below is displays the correlations between the wage of the under-secretary general, assistant secretary general, director level 2, and director level 1 and the total assessed contributions to the UN budget, total voluntary contributions to the UN budget, and the total UN budget. The sample is from 1991 – 2013. A full correlation matrix displaying net wages and budget subcategories can be found in the appendix.

1991 - 2013	Total assessed contributions	Total voluntary contributions	Total budget
USGGross	0,412	0,388	0,512
ASGGross	0,410	0,390	0,511
D-2 Gross	0,393	0,371	0,488

D-1 Gross	0,374	0,361	0,470

Table 8 - Correlations Matrix displays the relationship between the wages of the under-secretary general, assistant secretary general, director level 2, and director level 1 and the total assessed contributions, total voluntary contributions, and the United Nations

A t-test is employed to test whether the correlation between the United Nations wages and the United Nations budget and its significance. The null hypothesis is that the correlation between United Nations wages and the United Nations budget is zero. The alternate hypothesis is that the correlation is not equal to zero. The table below displays the p-value for each correlation.

P-value	Total Assessed Contributions	Total Voluntary Budget	Total Budget
USGGross	0,0517*	0,0661*	0,0126**
ASGGrosss	0,0508*	0,0674*	0,0126**
D-1 Gross	0,0783*	0,0909*	0,0237**
D-2 Gross	0,0634*	0,0811*	0,0180**

Table 9 - the p-value of the correlation between United Nations wages and the United Nations budget.

The correlation between the United Nations total budget and the United Nations wages has the highest statistical significance and is used to test pay-for-performance.

The data shows that there is a positive relationship between the United Nations budgets and wages. Therefore, this thesis rejects H_0. However, this relationship may be a spurious correlation. The positive relationship does not indicate causality. This thesis wholeheartedly acknowledges that the relationship between wage growth and the United Nations budget may have nothing to do with the exerted effort by management.

However, in addition to the wage, each employee receives a post adjustment to insure equal purchasing power globally. This post adjustment is also supposed to

match inflation. Therefore, ceteris paribus there is little reason that the wage should increase due to United Nations budget increase.

Additionally, each year the international civil service commission proposes wages changes which the general assembly can either accept or reject. (International Civil Service Commision, 2017). The member states are aware of the wage increases. A majority of the member states have the capacity to halt wage growth due to any reason of their choice. Naturally, if the member states were unhappy with bureaucrat performance wage growth would halt.

This thesis recognizes that the United Nations total budget is not a perfect performance measure. There is no doubt that it is a noisy performance measure. Still, this thesis chooses to use the United Nations total budget as a performance measure when testing pay-for-performance.

6.3 Extreme poverty as a performance measure

The member states and the General Assembly have tasked the United Nations to achieve the Sustainable Development Goals by 2030. This is analogous to the way for-profit companies tell their managers to increase value for shareholders. In a for-profit setting the natural performance measure might be the value of the share. For the United Nations determining the "natural" performance measure is trickier.

Some of the Sustainable Development Goals are rather diffuse. It might be tricky to use the degree of responsible consumption and production or sustainable cities and communities as a performance measure. Nonetheless, the first sustainable development goal is to end poverty and to eradicate extreme poverty by 2030. A person lives under extreme poverty if he or she consumes less that 1.90 international dollars per day. This can be measured and the data is reasonably easily available.

The table below shows the correlation between the wages of the United Nations under – secretary general, assistant secretary general. Director level 2, Director level 1, and the percentage change in extreme poverty in Europe and Central Asia, South Asia, Sub – Saharan Africa, and the World

	Europe and Central Asia	South Asia	Sub-Saharan Africa	World
USGGross	0,559	0,502	0,485	0,369
ASGGross	0,563	0,505	0,489	0,375
D-2 Gross	0,549	0,485	0,475	0,338
D-1 Gross	0,548	0,488	0,474	0,341

Table 10 - Correlation between the wages of Under-secretary general, Assistant secretary general, director level 2, director level 1, and the percentage change in the share of the population living in extreme poverty.

Furthermore, the correlation is tested by using a t-test and the resulting p-values are displayed below.

P – Value	Europe and Central Asia	South Asia	Sub-Saharan Africa	World
USGGross	0,0739*	0,1169	0,1309	0,2646
ASGGross	0,0713*	0,1127	0,1272	0,2557
D-2 Gross	0,0801*	0,1302	0,1396	0,3092
D-1 Gross	0,0809*	0,1277	0,1405	0,3050

Table 11 - P - value of the Correlation between United Nations wages and the percentage change in the share of the population living in extreme poverty.

There are several observations that call into question whether the extreme poverty is a performance measure of the United Nations. If the change in extreme poverty is a performance measure for the United Nations, then there should be a negative correlation between the change in extreme poverty and United Nations wages. This is not the case. The data shows that wages increase with a positive increase in extreme poverty. This is not in accordance with the Sustainable Development Goals.

Only the net wages are statistically significant. This is not a problem in itself, however since the net dependent wages of the under-secretary general are statistically significant, yet the net single wages of the under-secretary general are not, this calls into question whether the relationship between the wages and change in extreme poverty is described by a pattern or randomness. This is due to the fact that the only difference between dependent wages and singles wages is a percentage tax which should not affect significance.

These results lead this thesis to not reject the H_0 stating that there will not be a negative relationship between wages and the percentage change in extreme poverty.

6.4 Testing pay-for-performance

To test whether the agency considerations are affected by pay-for performance, the wages of the Under-secretary general, assistant secretary general, director level 2 and director level 1 are each the dependent variable in a ARDL regression where the total budget is the performance measure. Since the wages growth is real wage growth controlling for inflation is not necessary.

To build the regression, the first port of call is to employ a battery of Adjusted Dickey-Fuller tests (ADF) to test the data for unit roots. The percentage change in United Nations wages is I(0), the percentage change in the United Nations total budget is I(1), and the Inflation is I(0). Furthermore, the United Nations wages are co-integrated, the inflation data is not.

This is a situation where co-integration methodology of (Engle & Granger, 1987) has a tendency to fall short as the methodology requires the variables to have identical orders. Bounds test for co-integration are not subject to those limitations and since there is a one-to-one correspondence between the ECM of a VAR and an ARDL (Banerjee, 2003), then utilizing an ARDL model is an elegant solution. Especially since ARDL models are estimated through familiar least square techniques making them simpler to interpret.

The linear trend is restricted. This fits in nicely with the theory as the relationship between wages and the performance measure is to assumed to be linear. Simply

put, by have an unrestricted constant and a trend restricted to the co-integration space, linear trend, but not quadratic trends are allowed for in the data. (Wiedmann, 2011)

This regression does not suffer from autocorrelation or heteroscedasticity and the coefficient of the total budget variable is still statistically significant. However, removing the inflation variable has reduced the R^2 and adjusted R^2 down to 0,36 and 0.26 respectively. This means that this regression explains less of the data than the previous regression. On the other hand, this regression is statistically significant. The same is true for the regressions studying the wages of the assistant secretary general and the director level 2.

Variable	Coefficient	Std. Error	t-stat	p-value
USGGROSS(-1)	-0,249	0,211	-1,18	0,252
Total Budget	0,267	0,0959	2,78	0,0123**
C	0,031	0,0177	1,77	0,0935*
@Trend	-0,00211	0,00121	-1,74	0,0978*
R-squared	0,366	Prob(F-statistic)		0,0382**
Adjusted R-squared	0,260	Hannan-Quinn criter.		-3,71
F-Statistic	3.461	Durbin-watson stat.		2,15

Table 12 - ARDL regression where the wage growth of the under-secretary general is the dependent variable.

Variable	Coefficient	Std. Error	t-stat	p-value
ASGGROSS(-1)	-0,249	0,210	-1,18	0,252
Total Budget	0,268	0,0963	2,78	0,0123**
C	0,032	0,0178	1,79	0,0893*
@Trend	-0,00256	0,00122	-1,77	0,0935*
R-squared	0,368	Prob(F-statistic)		0,0373**
Adjusted R-squared	0,268	Hannan-Quinn criter.		-3,70
F-Statistic	3.49	Durbin-watson stat.		2,13

Table 13 - ARDL regression where the wage growth of the assistant secretary general is the dependent variable.

Variable	Coefficient	Std. Error	t-stat	p-value
D_2 GROSS(-1)	-0,285	0,211	-1,35	0,194
Total Budget	0,269	0,0991	2,71	0,0142**
C	0,0354	0,0184	1,92	0,0710*
@Trend	-0,00233	0,00126	-1,84	0,0911*
R-squared	0,361	Prob(F-statistic)		0,0404**
Adjusted R-squared	0,255	Hannan-Quinn criter.		-3,64
F-Statistic	3.398	Durbin-watson stat.		2,14

Table 14 - ARDL regression where the wage growth of director level 2 is the dependent variable.

Variable	Coefficient	Std. Error	t-stat	p-value
D_1 GROSS(-1)	-0,272	0,211	-1,35	0,194
Total Budget	0,274	0,0991	2,71	0,0142**
C	0,0369	0,0184	1,92	0,0710*
@Trend	-0,00231	0,00126	-1,84	0,0911*
R-squared	0,332	Prob(F-statistic)		0,0585*
Adjusted R-squared	0,221	Hannan-Quinn criter.		-3,39
F-Statistic	2.987	Durbin-watson stat.		2,15

Table 15 - ARDL regression where the wage growth of the director level 1 is the dependent variable.

The results show that there is a clear positive relationship between United Nations wages and the United Nations budget. Although, there is not enough evidence to determine the causality nor confirm any pay-for-performance structure.

Although the data is interesting, it is not convincing evidence of a pay-for-performance structure in the remuneration of United Nations staff. United Nations budget measures the collective performance of United Nations staff. United Nations budget as a performance measure does not reward individual performance, but collective performance. This may incentivize some staff to "free ride".

Additionally, this thesis cannot conclude with certainty that the relationship between United Nations wages and United Nations budget is not spurious. In other words, is difficult to state convincingly that United Nations wages and the United Nations budget are causally related.

Due to weak regression results and unclear causality, this thesis chooses not to reject H_0.

6.5 Summary of analysis

Studying the United Nations empirically is challenging as the level of data available is quite low and there is little to no previous research on agency considerations in supranational organizations. This thesis has purposefully chosen to be conservative in analysing the data and drawing conclusions.

As expected the analysis poses more questions than answers. There is evidence of agency considerations present in the sick leave data. Contractors have much less sick leave the full-time United Nations staff. This thesis postulates that the contractors have stronger incentives to exerted effort due to career concerns and reputational effects. Since the data displays average sick leave across different regions as wells as different clusters this rules out the possibility that difference is due to United Nations staff occupying more hazardous postings. Furthermore, the difference in sick leave is also apparent administrative positions in the UNOPS headquarters in Copenhagen.

Two possible performance measures are tested for adequacy. The first was the United Nations Budget. The second performance measure is the percentage change in extreme poverty. Although the United Nations budget and the United Nations wages have a positive relationship and may be a performance measure. It is difficult to conclude that there is a pay-for-performance structure in the United Nations compensation due to the "free rider problem" and spurious correlations.

Unfortunately, using the reduction in extreme poverty as a performance measure for the United Nations does not seem viable. Firstly, there is a positive correlation between the extreme poverty data and the United Nations wages. And secondly, the statistically significance is low.

The table below displays the hypothesis stated in chapter three and the conclusions derived in chapter six.

Hypothesis	Conclusion
H_0: There is no difference between the sick leave of United Nations contractors compared to United Nations full-time employees.	H_0 is rejected. The available data shows that United Nations contractors have less sick leave that United Nations full-time staff.
H_0: There will be not be a positive relationship between wages and the United Nations budget.	H_0 not rejected for the total assessed budget and total voluntary budget.

	H_0 rejected for the total United Nations budget.
H_0: In the United Nations, there is no link between top-level bureaucrat compensation and performance	H_0 not rejected
H_0: There will not be a negative relationship between wages and the percentage change in extreme poverty.	H_0 is not rejected.

Table 16 - Description of the hypothesis outlined in chapter three and their respective conclusions.

7. Conclusion

Studying theories of agency empirically is difficult. Assessing the agency considerations of the United Nations is highly difficult, not only due challenging, complicated theories, but also due to a general lack of transparency on the behalf of the United Nations. This thesis has asked the following research question: *"Is the United Nations affected by agency problems?"* as wells as *"How are possible agency problems in the United Nations characterized?"*. This thesis has studied two different models of agency, career concerns and pay-for-performance. Additionally, this thesis has utilized are small battalion of sub-questions to answer the research question.

This thesis shows that the United Nations is affected by agency problems and that these agency problems can be characterized by career concerns. Moreover, this thesis studies how a bureaucrat´s concern for a future career influences his or her incentives to exert effort. The data presented in this thesis clearly shows that contractors have notably lower leave than United Nations full time staff and that the United Nations staff have much more unsubstantiated sick-leave than their contractor counterparts.

Contractors working for the United Nations are incentivised to exert effort in order to obtain a new contract. This drives down sick leave. Conversely, the United Nations are not incentivised in this manner. Furthermore, there is no evidence that the United Nations Common System of Allowances and Benefits utilizes a bonus scheme. Hence, the United Nations staff are not implicitly incentivized by the need to obtain a new contract and the United Nations staff are not explicitly incentivized to exert effort by a bonus scheme. This indicates that the United Nations is affected by agency considerations and should be a topic for further research

Additionally, further research with better access to United Nations sick leave data could test career concerns more thoroughly, by running a regression with sick leave as the dependent variable, length of tenure as the independent variable, and age as the control variable.

The total budget of the United Nations has a statistically significant relationship with the United Nations wages. However, the United Nations total budget is a noisy performance measure as the relationship between wages and the total budget may or may not depend on employee performance. Therefore, when using the total budget as performance measure, it is arduous to make an unequivocal conclusion as to whether there pay is linked to performance in the United Nations. The relationship between United Nations wages and the United Nations budget may be affected by "the free rider problem", spurious correlations, and unobserved heterogeneity.

Regrettably, the relationship between wages and the percentage change in extreme poverty is not an adequate performance measure. The data has a low statistical significance and there is a positive correlation between wages and percentage change in extreme poverty. Hence, this thesis cannot reject the null hypothesis stating that there is no link between wages and the percentage change in the United Nations budget.

This thesis has explored a previously unstudied field. There is a great potential for further research providing there is a greater access to data.

Appendices

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United Nations Specialised Agencies and Common System

Name of Agency	Part of the common system?
UNDP	YES
UNICEF	YES
UNHCR	YES
WFP	YES
UNODC	NO
UNFPA	YES
UNCTAD	NO
UNEP	NO
UNRWA	YES
UN – Women	YES
UN – Habitat	NO
World Bank	NO
IMF	NO
WHO	YES
UNESCO	YES
ILO	YES
FAO	YES
IFAD	YES
IMO	YES
WMO	YES
WIPO	YES
ICAO	YES

ITU	YES
UNIDO	YES
UPU	YES
UNWTO	YES
UNAIDS	YES
UNISDR	NO
UNOPS	YES
IAEA	YES
WTO	NO
CTBTO	YES
OPCW	NO
IOM	NO

The United Nations Sustainable Development Goals

Goals	Targets
No Poverty	• By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day • By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions • Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable • By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance • By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters • Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions • Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions
Zero hunger	• By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round • By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons • By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment • By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality • By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed • Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries • Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round • Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

Good health and well being	• By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births • By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births • By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases • By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being • Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol • By 2020, halve the number of global deaths and injuries from road traffic accidents • By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes • Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all • By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination • Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate • Support the research and development of vaccines and medicines for the communicable and noncommunicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all • Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States • Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks
Quality Education	• By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes • By 2030, ensure that all girls and boys have access to quality early childhood development, care and preprimary education so that they are ready for primary education • By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university • By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship • By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations • By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy • By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development • Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all • By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries • By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states

Gender Equality	• End all forms of discrimination against all women and girls everywhere
	• Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
	• Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation
	• Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate
	• Ensure women's full and effective participation and equal opportunities for leadership at all levels of decisionmaking in political, economic and public life
	• Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences
	• Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws
	• Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women
	• Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels
Clean water and sanitation	• By 2030, achieve universal and equitable access to safe and affordable drinking water for all
	• By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
	• By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
	• By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
	• By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
	• By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
	• By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
	• Support and strengthen the participation of local communities in improving water and sanitation management
Affordable and clean energy	• By 2030, ensure universal access to affordable, reliable and modern energy services
	• By 2030, increase substantially the share of renewable energy in the global energy mix
	• By 2030, double the global rate of improvement in energy efficiency
	• By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology
	• By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support

Decent work and economic growth	• Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries
	• Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors
	• Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services
	• Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead
	• By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value
	• By 2020, substantially reduce the proportion of youth not in employment, education or training
	• Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms
	• Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment
	• By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products
	• Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all
	• Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries
	• By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization
Industry, Innovation and Infrastructure	• Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
	• Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries
	• Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets
	• By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
	• Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
	• Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States 18
	• Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities
	• Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

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Reduced Inequalities	- By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average - By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status - Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard - Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality - Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations - Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions - Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies - Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements - Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes - By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent
Sustainable cities and communities	- By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums - By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons - By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries - Strengthen efforts to protect and safeguard the world's cultural and natural heritage - By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations - By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management - By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities - Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning - By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels - Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials

Responsible Consumption and Production	- Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries - By 2030, achieve the sustainable management and efficient use of natural resources - By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses - By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment - By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse - Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle - Promote public procurement practices that are sustainable, in accordance with national policies and priorities - By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature - Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production - Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products - Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities
Climate action	- Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries - Integrate climate change measures into national policies, strategies and planning - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning - Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible - Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

Life below water	• By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution • By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans • Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels • By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics • By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information • By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation • By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism • Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries • Provide access for small-scale artisanal fishers to marine resources and markets • Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want
Life on land	• By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements • By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally • By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world • By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development • Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species • Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed • Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products • By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species • By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts • Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems • Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation • Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

Peace, justice and strong institutions	• Significantly reduce all forms of violence and related death rates everywhere
	• End abuse, exploitation, trafficking and all forms of violence against and torture of children
	• Promote the rule of law at the national and international levels and ensure equal access to justice for all
	• By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime
	• Substantially reduce corruption and bribery in all their forms
	• Develop effective, accountable and transparent institutions at all levels
	• Ensure responsive, inclusive, participatory and representative decision-making at all levels
	• Broaden and strengthen the participation of developing countries in the institutions of global governance
	• By 2030, provide legal identity for all, including birth registration
	• Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
	• Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime
	• Promote and enforce non-discriminatory laws and policies for sustainable development
Partnership for the goals	• Enhance global macroeconomic stability, including through policy coordination and policy coherence
	• Enhance policy coherence for sustainable development
	• Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development
	• Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries
	• Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships
	• By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts
	• By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

Incentives driven by career concerns and wages dynamics

The paper by (Harris & Holmström, 1982) postulates a dynamic equilibrum model of long term labour contracts under incomplete but symmetric information over time. To limit the size and scope of this thesis, only the simplest form of the model is studied in detail.

Assumptions

- The agent is operating in a competitive labour market
- The agent is endowed with labour which is sold for consumption
- No contingent contracts can be made. The manager is paid in advance.
- The characteristics of the agent are uncertain.
- Present performance acts as information about future performance.
- Mangers characteristics are assumed to be talent.
- There are two periods, $t = 1,2$
- The agent is risk neutral

The agent´s output performance at time t is given by

$$y_t = \eta + a_t + \varepsilon_t, t = 1,2$$

where η denotes the agent´s talent, $a_t \in [0, \infty]$ is the agent´s labour effort, and ε_t is a stochastic noise term assumed to be a normally distributed variable with mean zero and variance σ^2. The agent´s risk neutral preferences are given by an atemporal separable utility function.

$$U(c,a) = \sum_{t=1}^{\infty} \beta^{t-1} [c_t - g(a_t)]$$

The negative utility of exerting effort is increasing and convex and is measured by $g(\cdot)$. $U(c, a)$ is publically known. The agent must decide how much effort to exert. This is achieved by weighing the impact of present output on future wages. However, it is worth noting that the dependence of future wages on past output is

a function of the manager´s decision rule. Therefore, the agent´s decision rule and the wage function are determined simultaneously in equilibrium.

$y^{'} = (y_1 ... ... y_t)$ is defined as the history the agent´s performance outputs up to time t, is known by the markets and used as the basis for wage payments. $w_t(y^{t-1})$ is the wage in period t. $a_t(y^{t-1})$ is the agent´s exerted effort at time t. A competitive, risk neutral market will set

$$w_t(y^{t-1}) = E(y_t|y^{t-1}) = E(\eta|y^{t-1}) + a_t(y^{t-1})$$

The formula above establishes the wage in period t given that the manager´s decision rule is known. The agent´s decision rule solves

$$\max_{\{a_t(\cdot)\}} \sum_{t=1}^{\infty} \beta^{t-1} \left[Ew_t(y^{t-1}) - Eg\left(a_t(y^{t-1})\right) \right]$$

The solution to the wage formula and the agent´s decision rule determines equilibrium. It is worth noting that although the market cannot observe the agent´s actions directly it infers them by solving the decision rule. By observing output at time t in equilibrium the market learns about the agent´s talent. The markets learning process is can be thought of as DeGroot Learning. In the limit the agent´s talent will become fully known.

The interpretation of the (Harris & Holmstrom, 1982) model of dynamic wages is relatively unambiguous. Output may influence perceptions about the agent´s talent, as long as ability is unknown. Exerted effort may be a substitute for talent. As the agent exerts more effort the agent may be able to influence the learning process in his/her favour. Yet, in equilibrium this will not work as the market will know what effort level to expect and adjust the output measure accordingly. Simply put, in a rat race, the agent is trapped into supply the equilibrium level of effort expected on him or her, because lower exerted effort will bias the learning process against him or her.

Moreover, in the early stages the returns of exerting more effort will be higher the more uncertain the market is about ability. When there is little information the

market puts more weight on the most recent output observations when revision its beliefs about the agent´s talent. Per contra, over time the agent´s talent will be almost completely revealed and new observations of output will little effect on the market belief of the agent´s talent.

A Dynamic Perspective of Managerial Incentive problems

In (Holmstrom, 1999) a model is present where *"there are no explicit ouput-contingent contracts, but since the wage in each period is based on expected output and expected output depends on assessed ability, an "implicit contract" links today´s performance to future wages",* This creates an incentive problem. The employee may have a desire and the capacity to influence the learning process and hence the wage process. This could be done by taking unobserved actions that affect today´s performance. Holmström states that *"The fundamental incongruity in preferences is between the individual´s concern for human capital and the firm´s concern for financial returns. The two need only be weekly related".*

The (Holmström, 1999) paper makes two proposistions. The first is that the reputation process will work more efficiently if the more stochastic the ability process or if one can accurately observe output. The second proposistion in the case that it is expected that information about talent becomes more precise as time goes on, we expect young agent´s to over exert effort as the return for building a "good" reputation are highest when the market information is dffuse.

The managerial incentive problem can be split into two constituent problems. The first, addressed above, is incentivising the agent to exert effort. The second problem is securing proper behaviour in choice of investment or project.

Since the financial crises the has been a large discussion on managerial risk taking. Firms have been concern over excess risk-taking by managers and excutives. (Holmström, 1999) states that *"Some thin their managers take too much risk; but perhaps more commonly managers, particularly the younger ones, are seen as overly risk averse."*

The difference in risk preferences between the manager and the agent may boil down to the agent´s concern for future career. A significant part of an agent´s ability is displayed in his or her choices of projects and investments. When the market does not know the agent´s inherent ability these choices become tests revealing information about the agent´s ability. This market perception can be

used to set the agent´s future wage. Therefore, the agent´s choices have an innate risk even if the outcome is not directly linked to the agent´s total income.

These ideas can be explored in further detail as in the paper by (Holmström, 1999).

Assumptions
- The agent is in charge of choosing investment projects for a firm.
- The firm is risk neutral
- Talent is linked to whether projects are successful
- The probability that the agent is talented is η
- Projects can either fail or succeed
- y_- is the payoff if the project fails
- Conversely, y_+ is the payoff if the project succeeds
- The probability that the project succeeds if the manager is talented is l_T and l_N if the manager is not talented.
  - $l_T > l_N$

The overall probability of choosing a successful project is

$$p = l_T \eta + L_N(1 - \eta)$$

From a pool of possible projects the agent will choose at most one project and propose it to his or her superiors. The incentive problem arises from the possibility that the proposed project is not the optimal alternative from the principal's perspective.

It is also possible to show that the misrepresentation of signals and information will also be a problem.

Let η_+ be the probability that the agent is talent given that the project succeeds and let η_- be the probability that the agent is not talented given that the project fails.

$$n_+ = \frac{l_T \eta}{p}, \eta_- = \frac{(1 - l_N)\eta}{1 - P}$$

The agent´s total payoff will be a function of the updated assessments above assuming that opportunity wage is linear in η. It is therefore possible to find the expected value of the agent´s risk which corresponds to the prior probability that the agent is talented.

$$p\frac{l_T \eta}{p} + (1 - p)\frac{(1 - l_N)\eta}{1 - p} = \eta$$

A risk-neutral agent with be indifferent between the projects in the pool and could therefore be expected to propose the project that is aligned with the preferences of the principal. This is not true for a risk-averse agent as the expected return from undertaking a project is the same from abstaining all together. Since proposing a project is innately risky then the agent would prefer to refrain from proposing any project.

This means that the risk-averse agent will have an incentive to declare that no advantageous projects exist in the pool of available projects. If there are information asymmetries, then this claim cannot be rendered invalid.

It is clear from the analysis above that career concerns cause a discrepancy in risk preferences between the agent and the principal. This can be stressed by observing that the risk facing the agent is completely different from the risk facing the principal. The agent is concern about the probability of success. Furthermore, the agent dislikes project proposals which reveal the ability of that agent. The principal is predominantly interested in the actual payoff.

United Nations high – level bureaucrat wage growth

1991 - 2013	USG Gross	USG Net D	USG Net S	ASG Gross	ASG Net D	ASG Net S	D-2 Gross	D-2 Net D	D-2 Net S	D-1 Gross	D-1 Net D	D-1 Net S
Mean	2,02 %	3,08 %	3,14 %	2,05 %	3,08 %	3,10 %	2,10 %	3,08 %	3,86 %	2,29 %	3,20 %	3,21 %
Std. Dev	3,95 %	2,07 %	3,16 %	3,99 %	2,07 %	2,09 %	4,08 %	2,07 %	3,64 %	4,30 %	2,33 %	2,35 %
Skewness	-0,78	0,15	-1,54	-0,77	0,15	0,15	-0,88	0,15	2,70	-0,58	0,66	0,65
Kurtosis	0,12	-0,81	5,04	0,12	-0,81	-0,84	0,57	-0,81	10,09	0,59	0,41	0,38

2003 - 2013	USG Gross	USG Net D	USG Net S	ASG Gross	ASG Net D	ASG Net S	D-2 Gross	D-2 Net D	D-2 Net S	D-1 Gross	D-1 Net D	D-1 Net S
Mean	0,84 %	1,97 %	2,03 %	0,83 %	1,97 %	1,97 %	0,85 %	1,97 %	3,59 %	1,17 %	2,22 %	2,22 %
Std. Dev	3,65 %	1,77 %	3,94 %	3,69 %	1,77 %	1,77 %	3,86 %	1,77 %	5,04 %	4,45 %	2,50 %	2,50 %
Skewness	-0,65	1,37	-1,08	-0,62	1,37	1,37	-0,88	1,37	2,73	0,06	2,30	2,30
Kurtosis	0,71	3,14	3,60	0,59	3,14	3,13	1,35	3,14	7,99	1,98	6,54	6,54

2008 - 2013	USG Gross	USG Net D	USG Net S	ASG Gross	ASG Net D	ASG Net S	D-2 Gross	D-2 Net D	D-2 Net S	D-1 Gross	D-1 Net D	D-1 Net S
Mean	0,39 %	1,49 %	1,60 %	0,40 %	1,49 %	1,49 %	0,41 %	1,49 %	4,46 %	0,41 %	1,49 %	1,49 %
Std. Dev	3,60 %	1,19 %	5,12 %	3,59 %	1,19 %	1,19 %	3,89 %	1,19 %	6,67 %	3,89 %	1,19 %	1,19 %
Skewness	-1,67	-0,13	-0,98	-1,62	-0,13	-0,13	-2,06	-0,13	2,33	-2,05	-0,13	-0,13
Kurtosis	2,61	-1,61	2,82	2,39	-1,61	-1,61	4,46	-1,61	5,56	4,42	-1,61	-1,61

Key:
USG – Under-secretary general
ASG – Assistant secretary general
D-2 – Director level 2
D-1 – Director level 1

Gross – Gross wages
Net – Gross wages minus staff assessment (an internal UN tax)
D – Dependency rate (wages paid if employee has people that depend on him/her)
S - Single rate (wages paid if employee does not have dependents)

United Nations Budget Growth

1991 - 2013	Assessed contributions: UN Regular Budget (1)	Assessed contributions UN Peacekeeping Operations Budgets (2)	Assessed contributions: UN Specialized Agencies (3)	Assessed contributions Total (4)	Voluntary contributions: Selected UN Programmes and Funds (5)	Voluntary contributions: UN Specialized Agencies (6)	Voluntary contributions: Total (7)	Total budget
Mean	5,85 %	21,48 %	3,16 %	8,12 %	6,56 %	5,49 %	6,16 %	6,62 %
Std. Dev	11,05 %	58,89 %	5,28 %	15,89 %	9,28 %	11,05 %	7,88 %	8,28 %
Skewness	0,715	3,213	1,155	0,973	0,413	-0,154	0,783	-0,257
Kurtosis	0,332	13,054	0,533	3,863	0,191	-0,585	0,818	-0,106

2003 - 2013	Assessed contributions: UN Regular Budget (1)	Assessed contributions UN Peacekeeping Operations Budgets (2)	Assessed contributions: UN Specialized Agencies (3)	Assessed contributions Total (4)	Voluntary contributions: Selected UN Programmes and Funds (5)	Voluntary contributions: UN Specialized Agencies (6)	Voluntary contributions: Total (7)	Total budget
Mean	8,61 %	11,81 %	4,30 %	8,66 %	5,88 %	7,90 %	6,14 %	7,03 %
Std. Dev	14,49 %	13,62 %	4,57 %	7,52 %	7,45 %	10,21 %	6,18 %	6,44 %
Skewness	0,109	0,686	1,544	0,371	-0,522	-1,431	-0,480	-0,257
Kurtosis	-0,899	0,542	1,372	0,315	0,189	2,300	0,115	-0,057

2008 - 2013	Assessed contributions: UN Regular Budget (1)	Assessed contributions UN Peacekeeping Operations Budgets (2)	Assessed contributions: UN Specialized Agencies (3)	Assessed contributions Total (4)	Voluntary contributions: Selected UN Programmes and Funds (5)	Voluntary contributions: UN Specialized Agencies (6)	Voluntary contributions: Total (7)	Total budget
Mean	5,09 %	6,57 %	3,80 %	5,31 %	2,92 %	4,60 %	3,05 %	3,88 %
Std. Dev	16,57 %	13,58 %	4,39 %	7,05 %	7,92 %	12,46 %	5,78 %	6,02 %
Skewness	0,858	1,151	1,676	0,648	-0,139	-0,894	-0,595	-0,239
Kurtosis	0,722	1,829	2,953	0,429	0,833	0,854	-0,382	-0,745

Full correlation matrix between Wages and UN budget

	Assessed contributions UN Regular Budget (1)	Assessed contributions UN Peacekeeping Operations Budgets (2)	Assessed contributions UN Specialized Agencies (3)	Assessed contributions Total (4)	Voluntary contributions Selected UN Programs and Funds (5)	Voluntary contributions UN Specialized Agencies (6)	Voluntary contributions Total (7)	Total budget
USG Gross	0,310	0,394	-0,130	0,412	0,381	0,153	0,388	0,512
USG Net D	0,086	0,425	-0,234	0,432	0,227	-0,199	0,154	0,412
USG Net S	0,145	0,250	-0,202	0,231	0,035	-0,053	0,009	0,179
ASG Gross	0,310	0,394	-0,131	0,410	0,385	0,146	0,390	0,511
ASG Net D	0,086	0,425	-0,234	0,432	0,227	-0,199	0,154	0,412
ASG Net S	0,087	0,423	-0,233	0,428	0,230	-0,203	0,156	0,410
D-2 Gross	0,312	0,381	-0,144	0,393	0,367	0,139	0,371	0,488
D-2 Net D	0,086	0,425	-0,234	0,432	0,227	-0,199	0,154	0,412
D-2 Net S	0,094	0,138	-0,191	0,089	-0,249	-0,049	-0,257	-0,077
D-1 Gross	0,346	0,354	-0,143	0,374	0,359	0,116	0,361	0,470
D-1 Net D	0,159	0,367	-0,215	0,374	0,210	-0,190	0,143	0,375
D-1 Net S	0,158	0,366	-0,216	0,391	0,212	-0,194	0,144	0,376

Correlation between percentage change in share of population living in extreme poverty, by world region and United Nation wages.

	East Asia and Pacific	Europe and Central Asia	Latin America and the Caribbean	Middle East and North Africa	South Asia	Sub-Saharan Africa	World
USGGross	0,362	0,559	0,559	-0,187	0,502	0,485	0,369
USGNet D	0,545	0,705	0,103	-0,178	0,644	0,649	0,597
USGNet S	-0,163	0,369	0,158	-0,016	0,277	0,328	0,141
ASGGross	0,372	0,563	0,045	-0,190	0,505	0,489	0,375
ASGNet D	0,546	0,705	0,103	-0,179	0,644	0,649	0,597
ASGNet S	0,553	0,704	0,113	-0,188	0,642	0,648	0,604
D-2 Gross	0,288	0,549	0,064	-0,163	0,485	0,475	0,338
D-2 Net D	0,545	0,705	0,103	-0,178	0,644	0,649	0,597
D-2 Net S	-0,486	0,136	0,228	0,172	0,043	0,156	0,008
D-1 Gross	0,290	0,548	0,065	-0,168	0,488	0,474	0,341
D-1 Net D	0,545	0,705	0,103	-0,178	0,644	0,649	0,597
D-1 Net S	0,545	0,712	0,106	-0,177	0,644	0,654	0,598

P – value of correlations between percentage change in share of population, by world region and United Nations Wages

Note: Green cell marks p-value < 0.05

	East Asia and Pacific	Europe and Central Asia	Latin America and the Caribbean	Middle East and North Africa	South Asia	Sub-Saharan Africa	World
USGGross	0,2743	0,0739	0,8945	0,5819	0,1169	0,1309	0,2646
USGNet D	0,0826	0,0155	0,7629	0,5998	0,0324	0,0307	0,0526
USGNet S	0,6317	0,2639	0,6419	0,9626	0,4101	0,3251	0,6785
ASGGross	0,2603	0,0713	0,8943	0,5764	0,1127	0,1272	0,2557
ASGNet D	0,0826	0,0155	0,7628	0,5994	0,0323	0,0307	0,0526
ASGNet S	0,0778	0,0156	0,7418	0,5806	0,0334	0,0312	0,0490
D-2 Gross	0,3909	0,0801	0,8526	0,6316	0,1302	0,1396	0,3092
D-2 Net D	0,0827	0,0155	0,7629	0,5998	0,0323	0,0307	0,0526
D-2 Net S	0,1295	0,6907	0,5004	0,6140	0,8999	0,6474	0,9813
D-1 Gross	0,3862	0,0809	0,8484	0,6213	0,1277	0,1405	0,3050
D-1 Net D	0,0826	0,0155	0,7629	0,5996	0,0324	0,0308	0,0525
D-1 Net S	0,0826	0,0141	0,7565	0,6018	0,0325	0,0291	0,0518

Wage and United Nations Budget regressions

Under – secretary General and the United Nations Budget

```
Dependent Variable: USGGROSS
Method: ARDL
Date: 08/04/17   Time: 11:04
Sample (adjusted): 1994 2013
Included observations: 20 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Hannan-Quinn criterion (HQ)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET INFLATION
Fixed regressors: C
Number of models evalulated: 100
Selected Model: ARDL(1, 0, 3)
Note: final equation sample is larger than selection sample
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
USGGROSS(-1)	-0.327774	0.230774	-1.420322	0.1791
TOTAL_BUDGET	0.262609	0.111838	2.348125	0.0353
INFLATION	-0.368957	0.902514	-0.408810	0.6893
INFLATION(-1)	-1.272931	0.895068	-1.422161	0.1785
INFLATION(-2)	-0.252264	0.967996	-0.260604	0.7985
INFLATION(-3)	1.113978	0.881645	1.263523	0.2286
C	0.023466	0.048871	0.480158	0.6391

R-squared	0.399226	Mean dependent var	0.013021
Adjusted R-squared	0.121946	S.D. dependent var	0.037144
S.E. of regression	0.034806	Akaike info criterion	-3.608855
Sum squared resid	0.015749	Schwarz criterion	-3.260348
Log likelihood	43.08855	Hannan-Quinn criter.	-3.540823
F-statistic	1.439795	Durbin-Watson stat	1.223735
Prob(F-statistic)	0.272594		

*Note: p-values and any subsequent tests do not account for model selection.

```
Dependent Variable: USGGROSS
Method: ARDL
Date: 08/04/17   Time: 14:04
Sample (adjusted): 1992 2013
Included observations: 22 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Hannan-Quinn criterion (HQ)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET
Fixed regressors: C @TREND
Number of models evalulated: 20
Selected Model: ARDL(1, 0)
Note: final equation sample is larger than selection sample
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
USGGROSS(-1)	-0.249122	0.210619	-1.182809	0.2523
TOTAL_BUDGET	0.267063	0.095936	2.783767	0.0123
C	0.031351	0.017701	1.771113	0.0935
@TREND	-0.002111	0.001209	-1.746348	0.0978

R-squared	0.365826	Mean dependent var	0.018530
Adjusted R-squared	0.260130	S.D. dependent var	0.039603
S.E. of regression	0.034065	Akaike info criterion	-3.758127
Sum squared resid	0.020888	Schwarz criterion	-3.559756
Log likelihood	45.33940	Hannan-Quinn criter.	-3.711397
F-statistic	3.461122	Durbin-Watson stat	2.149382
Prob(F-statistic)	0.038226		

*Note: p-values and any subsequent tests do not account for model selection.

```
Dependent Variable: USGGROSS
Method: ARDL
Date: 08/04/17   Time: 14:15
Sample (adjusted): 1994 2013
Included observations: 20 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Hannan-Quinn criterion (HQ)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET INFLATION
Fixed regressors: C @TREND
Number of models evalulated: 100
Selected Model: ARDL(1, 0, 3)
Note: final equation sample is larger than selection sample
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
USGGROSS(-1)	-0.427434	0.227771	-1.876595	0.0851
TOTAL_BUDGET	0.323552	0.112890	2.866088	0.0142
INFLATION	-0.801647	0.898767	-0.891941	0.3900
INFLATION(-1)	-1.684884	0.888064	-1.897256	0.0821
INFLATION(-2)	-0.744707	0.969662	-0.768007	0.4573
INFLATION(-3)	0.706315	0.875101	0.807124	0.4353
C	0.097284	0.065988	1.474267	0.1662
@TREND	-0.002501	0.001592	-1.570840	0.1422

R-squared	0.501692	Mean dependent var	0.013021
Adjusted R-squared	0.211013	S.D. dependent var	0.037144
S.E. of regression	0.032993	Akaike info criterion	-3.695855
Sum squared resid	0.013063	Schwarz criterion	-3.297562
Log likelihood	44.95855	Hannan-Quinn criter.	-3.618104
F-statistic	1.725931	Durbin-Watson stat	1.541758
Prob(F-statistic)	0.193811		

*Note: p-values and any subsequent tests do not account for model selection.

Assistant secretary general and the United Nations Budget

```
Dependent Variable: ASGGROSS
Method: ARDL
Date: 08/04/17   Time: 11:16
Sample (adjusted): 1994 2013
Included observations: 20 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Hannan-Quinn criterion (HQ)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET INFLATION
Fixed regressors: C
Number of models evaluated: 100
Selected Model: ARDL(1, 0, 3)
Note: final equation sample is larger than selection sample
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ASGGROSS(-1)	-0.328102	0.230687	-1.422282	0.1785
TOTAL_BUDGET	0.262480	0.112482	2.333522	0.0363
INFLATION	-0.394179	0.910452	-0.432948	0.6721
INFLATION(-1)	-1.283344	0.902684	-1.421698	0.1787
INFLATION(-2)	-0.260145	0.976313	-0.266457	0.7941
INFLATION(-3)	1.111412	0.889001	1.250180	0.2333
C	0.024820	0.049310	0.503333	0.6232

R-squared	0.397168	Mean dependent var		0.013147
Adjusted R-squared	0.118938	S.D. dependent var		0.037393
S.E. of regression	0.035099	Akaike info criterion		-3.592065
Sum squared resid	0.016015	Schwarz criterion		-3.243558
Log likelihood	42.92065	Hannan-Quinn criter.		-3.524032
F-statistic	1.427480	Durbin-Watson stat		1.200299
Prob(F-statistic)	0.276735			

```
*Note: p-values and any subsequent tests do not account for model
       selection.
```

```
Dependent Variable: ASGGROSS
Method: ARDL
Date: 08/04/17   Time: 12:04
Sample (adjusted): 1992 2013
Included observations: 22 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Hannan-Quinn criterion (HQ)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET
Fixed regressors: C @TREND
Number of models evaluated: 20
Selected Model: ARDL(1, 0)
Note: final equation sample is larger than selection sample
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ASGGROSS(-1)	-0.248756	0.210150	-1.183710	0.2519
TOTAL_BUDGET	0.268149	0.096346	2.783188	0.0123
C	0.032075	0.017857	1.796212	0.0893
@TREND	-0.002156	0.001218	-1.770901	0.0935

R-squared	0.367639	Mean dependent var		0.018732
Adjusted R-squared	0.262246	S.D. dependent var		0.039925
S.E. of regression	0.034293	Akaike info criterion		-3.744796
Sum squared resid	0.021168	Schwarz criterion		-3.546425
Log likelihood	45.19276	Hannan-Quinn criter.		-3.698066
F-statistic	3.488258	Durbin-Watson stat		2.131491
Prob(F-statistic)	0.037325			

```
*Note: p-values and any subsequent tests do not account for model
       selection.
```

```
Dependent Variable: ASGGROSS
Method: ARDL
Date: 08/04/17   Time: 14:30
Sample (adjusted): 1994 2013
Included observations: 20 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Hannan-Quinn criterion (HQ)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET INFLATION
Fixed regressors: C @TREND
Number of models evaluated: 100
Selected Model: ARDL(1, 0, 3)
Note: final equation sample is larger than selection sample
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ASGGROSS(-1)	-0.430943	0.226795	-1.900143	0.0817
TOTAL_BUDGET	0.325102	0.113002	2.876959	0.0139
INFLATION	-0.843610	0.903050	-0.934179	0.3686
INFLATION(-1)	-1.710017	0.891797	-1.917496	0.0793
INFLATION(-2)	-0.769653	0.973781	-0.790377	0.4446
INFLATION(-3)	0.691798	0.878171	0.787771	0.4461
C	0.101143	0.066349	1.524421	0.1533
@TREND	-0.002581	0.001599	-1.613497	0.1326

R-squared	0.504636	Mean dependent var		0.013147
Adjusted R-squared	0.215674	S.D. dependent var		0.037393
S.E. of regression	0.033116	Akaike info criterion		-3.688410
Sum squared resid	0.013160	Schwarz criterion		-3.290118
Log likelihood	44.88410	Hannan-Quinn criter.		-3.610659
F-statistic	1.746374	Durbin-Watson stat		1.522215
Prob(F-statistic)	0.189024			

```
*Note: p-values and any subsequent tests do not account for model
       selection.
```

Director level 2 and the United Nations Budget

```
Dependent Variable: D_2_GROSS
Method: ARDL
Date: 08/04/17   Time: 11:20
Sample (adjusted): 1994 2013
Included observations: 20 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Hannan-Quinn criterion (HQ)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET INFLATION
Fixed regressors: C
Number of models evalulated: 100
Selected Model: ARDL(1, 0, 3)
Note: final equation sample is larger than selection sample
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D_2_GROSS(-1)	-0.352101	0.227717	-1.546222	0.1460
TOTAL_BUDGET	0.259244	0.114571	2.262738	0.0414
INFLATION	-0.420070	0.926610	-0.453341	0.6578
INFLATION(-1)	-1.305135	0.918734	-1.420580	0.1790
INFLATION(-2)	-0.201454	0.992383	-0.203000	0.8423
INFLATION(-3)	1.230868	0.908582	1.354713	0.1986
C	0.022416	0.050126	0.447196	0.6621

R-squared	0.403531	Mean dependent var	0.013599
Adjusted R-squared	0.128237	S.D. dependent var	0.038267
S.E. of regression	0.035729	Akaike info criterion	-3.556478
Sum squared resid	0.016596	Schwarz criterion	-3.207971
Log likelihood	42.56478	Hannan-Quinn criter.	-3.488446
F-statistic	1.465820	Durbin-Watson stat	1.136255
Prob(F-statistic)	0.264049		

*Note: p-values and any subsequent tests do not account for model selection.

```
Dependent Variable: D_2_GROSS
Method: ARDL
Date: 08/04/17   Time: 14:06
Sample (adjusted): 1992 2013
Included observations: 22 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Schwarz criterion (SIC)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET
Fixed regressors: C @TREND
Number of models evalulated: 20
Selected Model: ARDL(1, 0)
Note: final equation sample is larger than selection sample
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D_2_GROSS(-1)	-0.284696	0.211140	-1.348375	0.1943
TOTAL_BUDGET	0.268881	0.099080	2.713776	0.0142
C	0.035428	0.018464	1.918762	0.0710
@TREND	-0.002333	0.001263	-1.847820	0.0811

R-squared	0.361556	Mean dependent var	0.019300
Adjusted R-squared	0.255149	S.D. dependent var	0.040845
S.E. of regression	0.035251	Akaike info criterion	-3.689679
Sum squared resid	0.022367	Schwarz criterion	-3.491307
Log likelihood	44.58647	Hannan-Quinn criter.	-3.642948
F-statistic	3.397847	Durbin-Watson stat	2.144156
Prob(F-statistic)	0.040421		

*Note: p-values and any subsequent tests do not account for model selection.

```
Dependent Variable: D_2_GROSS
Method: ARDL
Date: 08/04/17   Time: 14:36
Sample (adjusted): 1994 2013
Included observations: 20 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Hannan-Quinn criterion (HQ)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET INFLATION
Fixed regressors: C @TREND
Number of models evalulated: 100
Selected Model: ARDL(1, 0, 3)
Note: final equation sample is larger than selection sample
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D_2_GROSS(-1)	-0.469305	0.224677	-2.088796	0.0587
TOTAL_BUDGET	0.327537	0.114904	2.850520	0.0146
INFLATION	-0.896620	0.914172	-0.980800	0.3461
INFLATION(-1)	-1.752982	0.901913	-1.943628	0.0758
INFLATION(-2)	-0.754053	0.987230	-0.763807	0.4597
INFLATION(-3)	0.807089	0.888617	0.908253	0.3816
C	0.102977	0.067306	1.529990	0.1519
@TREND	-0.002731	0.001634	-1.671740	0.1204

R-squared	0.516204	Mean dependent var	0.013599
Adjusted R-squared	0.233989	S.D. dependent var	0.038267
S.E. of regression	0.033492	Akaike info criterion	-3.665841
Sum squared resid	0.013461	Schwarz criterion	-3.267548
Log likelihood	44.65841	Hannan-Quinn criter.	-3.588090
F-statistic	1.829117	Durbin-Watson stat	1.488065
Prob(F-statistic)	0.170910		

*Note: p-values and any subsequent tests do not account for model selection.

Director level 1 and the United Nations Budget

```
Dependent Variable: D_1_GROSS
Method: ARDL
Date: 08/04/17   Time: 11:23
Sample (adjusted): 1994 2013
Included observations: 20 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Hannan-Quinn criterion (HQ)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET INFLATION
Fixed regressors: C
Number of models evalulated: 100
Selected Model: ARDL(1, 0, 3)
Note: final equation sample is larger than selection sample
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D_1_GROSS(-1)	-0.348425	0.235531	-1.479320	0.1629
TOTAL_BUDGET	0.278077	0.125022	2.224230	0.0445
INFLATION	-0.466412	0.999740	-0.466534	0.6486
INFLATION(-1)	-1.462244	0.990921	-1.475642	0.1638
INFLATION(-2)	-0.183974	1.080429	-0.170278	0.8674
INFLATION(-3)	1.366738	0.983073	1.390271	0.1878
C	0.025163	0.054153	0.464668	0.6499

R-squared	0.401955	Mean dependent var		0.015607
Adjusted R-squared	0.125935	S.D. dependent var		0.041208
S.E. of regression	0.038526	Akaike info criterion		-3.405762
Sum squared resid	0.019295	Schwarz criterion		-3.057256
Log likelihood	41.05762	Hannan-Quinn criter.		-3.337730
F-statistic	1.456252	Durbin-Watson stat		1.207996
Prob(F-statistic)	0.267158			

*Note: p-values and any subsequent tests do not account for model selection.

```
Dependent Variable: D_1_GROSS
Method: ARDL
Date: 08/04/17   Time: 14:13
Sample (adjusted): 1992 2013
Included observations: 22 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Hannan-Quinn criterion (HQ)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET
Fixed regressors: C @TREND
Number of models evalulated: 20
Selected Model: ARDL(1, 0)
Note: final equation sample is larger than selection sample
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D_1_GROSS(-1)	-0.271955	0.215976	-1.259194	0.2240
TOTAL_BUDGET	0.274697	0.107559	2.553912	0.0199
C	0.036940	0.019842	1.861674	0.0791
@TREND	-0.002311	0.001354	-1.706788	0.1051

R-squared	0.332358	Mean dependent var		0.021182
Adjusted R-squared	0.221084	S.D. dependent var		0.043178
S.E. of regression	0.038107	Akaike info criterion		-3.533867
Sum squared resid	0.026139	Schwarz criterion		-3.335496
Log likelihood	42.87254	Hannan-Quinn criter.		-3.487137
F-statistic	2.986846	Durbin-Watson stat		2.145884
Prob(F-statistic)	0.058524			

*Note: p-values and any subsequent tests do not account for model selection.

```
Dependent Variable: D_1_GROSS
Method: ARDL
Date: 08/04/17   Time: 14:38
Sample (adjusted): 1995 2013
Included observations: 19 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): TOTAL_BUDGET INFLATION
Fixed regressors: C @TREND
Number of models evalulated: 100
Selected Model: ARDL(1, 0, 4)
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D_1_GROSS(-1)	-0.250354	0.191871	-1.304805	0.2212
TOTAL_BUDGET	0.294535	0.099757	2.952520	0.0145
INFLATION	-0.883770	0.766280	-1.153324	0.2756
INFLATION(-1)	-1.451466	0.771629	-1.881041	0.0894
INFLATION(-2)	-0.470750	0.887272	-0.530558	0.6073
INFLATION(-3)	1.592810	0.769076	2.071069	0.0652
INFLATION(-4)	-0.816032	0.739213	-1.103920	0.2955
C	0.107407	0.067261	1.596884	0.1414
@TREND	-0.003722	0.001445	-2.576271	0.0276

R-squared	0.693486	Mean dependent var		0.019924
Adjusted R-squared	0.448276	S.D. dependent var		0.037403
S.E. of regression	0.027782	Akaike info criterion		-4.023336
Sum squared resid	0.007718	Schwarz criterion		-3.575971
Log likelihood	47.22170	Hannan-Quinn criter.		-3.947624
F-statistic	2.828124	Durbin-Watson stat		2.213470
Prob(F-statistic)	0.063185			

*Note: p-values and any subsequent tests do not account for model selection.

Preliminary Master Thesis

BI Norwegian Business School

Preliminary Master Thesis

Are high – level bureaucrats compensated through the United Nations common system for salaries, allowances and benefits paid like bureaucrats?

Supervisor:

Salvatore Miglietta, Associate Professor

Campus:
BI Oslo

Submission Date:

15.01.2017

Study Programme:
Master of Science in Business with a Major in Finance

Contents

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Abstract

The United Nations is tasked with solving the largest problems facing humanity in the 21st century. To accomplish the goals ratified in the charter by 193 Member States the United Nations employs thousands of bureaucrats in the United Nations system of specialised agencies, programmes and funds.

This thesis studies whether agency considerations are present in the United Nations by examining the following research question: "Are high-level bureaucrats compensated through the United Nations common system for salaries, allowances and benefits paid like bureaucrats?".

Abbreviations

FAO	Food and Agriculture Organisation
IAEA	International Atomic Energy Agency
ICAO	International Civil Aviation Organisation
IFAD	International Fund for Agricultural Development
ILO	International Labour Organisation
IMF	International Monetary Fund
IMO	International Maritime Organisation
IOM	International Organisation for Migration
ITC	International Trade Centre
ITU	International Telecommunication Union
OPCW	Organisation for the Prohibition of Chemical Weapons
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Program
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Education, Scientific and Cultural Organisation
UNEP	United Nations Environment Program
UNFPA	United Nations Populations Fund

UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Funds
UNIDO	United Nations Industrial Development Organisation
UNISDR	United Nations Office for Disaster Reduction
UNOCD	United Nations Office on Drugs and Crime
UNOPS	United Nations Office for Project Services
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
UNwomen	UN Women
UNWTO	World Tourism Organisation
UN-Habitat	United Nations Human Settlements Program
UPU	Universal Postal Union
WBG	World Bank Group
WFP	World Food Program
WHO	World Health Organisation
WIPO	World Intellectual Property Organisation
WMO	World Meteorological Organisation

1.0 Introduction

The United Nations is tasked with solving the largest problems of the 21st century. Be they climate change, antibiotic resistant bacteria, world hunger, international conflicts, intellectual property rights and many more. Working tirelessly to solve these issue are thousands of bureaucrats employed within the United Nations system of specialised agencies, programmes and funds.

This thesis was motivated by an idea, are there agency problems in the UN? And if so, how do these agency problems affect the United Nations?

Research into this field has uncovered that very little research has been done on the corporate governance of supranational organisations. For some this may seem natural, after all, traditionally bureaucrats have been viewed as having strong intrinsic motivations and weak monetary incentives, Prendergast (2007). Yet, this need not be the case, some public choice theorists such as Niskansen (1975) and Mueller (2003) argue that bureaucrats are self-interest maximisers who aim to advance their goals by fostering the growth of their organisation. This argument must then imply that there is a mismatch between the incentives of the principal and the incentives of the agent. This could indicate that agency considerations are present in the non-corporate organisations.

1.1 Research area and scope

This master thesis seeks to investigate the salary and remuneration structure for high – level bureaucrats compensated through the United Nations common system of salaries, allowances and benefits. This staff is employed to assist the United Nations and its Member States to achieve the mission of the UN stated in the charter and thus the Sustainable Development Goals adopted by the United Nations on September 15th, 2015.

Congruent to the corporate finance literature this thesis looks for evidence of agency problems in the compensation of high-level bureaucrats in the United

Nations. The lack of an obvious performance measure for a supranational organisation is a significant complication.

A possible performance measure could be world economic growth. This has parallels to the stock price or return – on – assets and may be validated by arguing that it captures United Nations ability to increase world prosperity which is one on the founding purposes ratified in the charter. Yet, world economic growth certainly incorporates many other factors as well, making it a noisy performance measure.

Alternatively, a possible performance measure may be the amount of revenue collected by the United Nations and its affiliated agencies. This performance measure has several attractive features. The UN budget is financed by assessed and voluntary contributions from the Member States. The funding of the United Nation could be thought of as a natural 'performance' measure for the services that the United Nations provides. The funding of the United Nation is of direct relevance to the Member States as the more the Member States fund the United Nations the more the Member States lower their disposable income. Secondly, the level of funding is at least partially under the control of the high – level bureaucrats. Diplomats from the respective member states make the final decision, yet the budget and the financing plans are drafted by the bureaucrats. Hence, the bureaucrats are in a position to set the framework for the debate.

Based on the research area and scope of this thesis the following research question is developed:

Are high – level bureaucrats compensated through the United Nations common system for salaries, allowances and benefits paid like bureaucrats?

1.2 Central terms
This section seeks to offer a general definition of central terms applied throughout the thesis. Naturally, Chapter 2.0 Background and Literature will encompass a thorough description of the concepts and terms used in this thesis.

Agency Problem - An agency problem can be defined as a conflict of interest between the principal (e.g. shareholders, politicians) and the agent (e.g. management, bureaucrats).

Agency Cost - This term refers to the cost of the agency problem and can be both direct and indirect. Direct agency cost come in two forms, the first is the corporate expenditure that benefits the agent but not the principal. The second is the cost that comes from the need to monitor the agent's actions. Indirect agency costs can be thought of as the opportunity cost of the conflict of interest.

1.3 Structure of thesis

This thesis is structured into seven main chapters. Chapter two provides a through description on the literature and background information relevant to the research process. Chapter three presents and explains the main theories related to the research question. Chapter four describes the way in which the investigation is conducted based on the previous chapters. Chapter five addresses the data used in the investigation to calibrate the theoretical model. Chapter six discusses the results in relation to the theoretical model and the existing literature. Finally, chapter seven presents concluding remarks, implications of the result by affected parties and provides suggestions for future research.

2.0 Background and literature review

The following literature review incorporates the previous literature on the topic of executive compensation and characterises the main concepts that embody the research area. Furthermore, this chapter provides background information necessary to examine the compensation structure of the United Nations as well as the overall structure on the United Nations and its mission.

Although the literature on executive compensation in corporate firms is extensive, there is very little research done in non-corporate firms on a supranational level. Therefore, this thesis must amalgamate literature from various fields to create a cohesive understanding of the research question.

2.1 Agency Problems

Agency problems can be sorted in to main types, empire building and perquisites. Perquisites can be thought of as fringe benefits consumed by managers while on the job. The shareholders must bear the costs while managers get the perks, which come in a multitude of forms such as expensive offices, company jets etc. The important part is noticing that these perks are all financed by shareholder funds.

Research conducted by Professor David Yermack shows that the stock prices decrease by around 1% when perquisite behaviour is disclosed to the public. Furthermore, Yermack's research shows that firms that allow executives to enjoy perks in excess underperform by 4%. This is decidedly more that the cost of executive excess. Clearly, the market severely condemns perquisite behaviour by managers. (Yermack, 2006)

Empire building can be thought of as the pursuit of growth instead of maximising shareholder-value. (Jensen M. C., 1986). Naturally, there is a link between firm growth and shareholder-value, growth may not necessarily be a driver of shareholder-value and vice versa. Just as with perquisites, empire building may come in various forms. This may include firms taking over other businesses, sometimes also firms that operate in completely different markets or sectors. Executives may benefit from increasing the size of their firm. This may include

increased power and social status from running a large firm. It is noted that *"Managerial compensation has also been reported to grow in line with company size".* (Goergen, 2012). When executives pursue growth strategies instead of shareholder-value maximisation to build empires the benefits may go to management whilst the cost is borne by the shareholder.

Another consequence of agency problems is managerial entrenchment where executives protect themselves against any form of disciplinary action or hostile takeover.

2.2 Executive compensation in corporate firms

The research literature on corporate executive compensation is influenced by two main explanations for the observed pay structures: efficient contracting and managerial power. The first view argues that executive compensation is an approach to provide managers with the optimal set of incentives, and therefore a solution to the inherent agency problem. The second point of view suggests that executive compensation is the product of rent-seeking by self-interested and opportunistic CEOs, and consequently a symptom of the agency problem. (Boyle & Rademaker, 2015)

2.3 Executive compensation in non-corporate firms and organisations

This thesis hopes to extend the pre-existing literature on executive compensation in non-corporate firms and organisation. Although, it has not been possible to find literature on agency problems in supranational organisations research has been done on comparable considerations.

A study done by (Boyle & Rademaker, 2015) conclude that CEO bureaucrats working at the local and regional level in New Zealand are not paid like bureaucrats and are rewarded for empire building.

(Cahan, Chua, & Nyamori, 2005) have estimated a positive relationship between executive pay and accounting performance in government-owned trading businesses.

Moreover, research done by (Di Tella & Fisman, 2002) and (Tuttle & Bumpass, 2010) report that there is strong evidence suggesting that there a positive link between per-capita wealth and politician remuneration.

Furthermore, research into agency considerations in the health sector by (Brickley & Van Horn, Managerial incentive in nonprofit organizations: evidence from hospitals., 2002), (Brickley, Van Horn, & Wedig, 2010), and (Ballantine, Forker, & Greenwood, 2008) report an array of findings with evidence suggesting both efficient contracting and rent seeking forces at play.

2.4 The structure of the United Nations

The United Nations was founded in 1945 and consists of 193 Member States. The founding charter consists of the purposes and principles that guide the work and mission of the United Nations. Through the power vested in the charter and its unique international scope, the United Nations addresses an array of issues challenging humanity in the 21th century,

What´s more the United Nations offers its members states a forum to voice their views, woe´s and predicaments. The United Nations has become conclave allowing governments to solve problems and find agreements together by facilitating dialogue and negotiations.

2.4.1. The UN Charter

The mission and purpose of the United Nations is stated in the United Nations Charter that came into force on the 24th of October 1945. The United Nations Charter states that

"We the peoples of the United Nations determine to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind, and to reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nation large and small, and to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained, and to promote social progress and better standards of life in larger freedom." - Preamble, The United Nations Charter.

2.4.2. The Main Organs of the United Nations

The main organs of the United Nations are the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice, and the UN Secretariat.

All 193 member states of the United Nations are represented in the General Assembly. This makes it the only UN body with universal representation. The General Assembly is the main policymaking and representative organ of the United Nations. The Security Council has 15 members; 5 permanent and 10 non-permanent members. Under the UN charter the Security Council has the primary responsibility for the maintenance of international peace and security. The Economic and Social Council is the main body for coordination, policy review and dialogue. Moreover, the Economic and Social council has the main responsibility or the implementation of internationally agreed development goals. It has 54 members. The Trusteeship Council provides international supervision of 11 trustee territories that had been placed under administration of seven member states. The trusteeship council suspended operations in 1994. The International Court of Justice is the principal judicial organ of the United Nations. The UN Secretariat is the bureaucratic arm of the United Nations and consists of the Secretary-General and UN staff members. The implement the work of the UN as mandated by the General Assembly and the other main organs.

2.4.3. United Nations Specialised Agencies

The United Nations system is made up of the United Nations itself and 34 funds, programs, and specialised agencies, including UNDP, UNICEF, UNHCR, WFP, UNODC, UNFPA, UNCTAD, UNCTAD, UNEP, UNRWA, UNWomen, UN-Habitat, World Bank, IMF, WHI, UNESCO, ILO, FAO, IFAD, IMO, WMO, WIPO, ICAO, ITU, UNIDO, UPU, UNWTO, UNAIDS, UNISDR, UNOPS, IAEA, WTO, CTBTO, OPCW, and IOM. Each agency has their own membership, leadership and budget. The programs and funds are financed through voluntary contribution. Whilst the specialised agencies are financed through voluntary and accessed contributions.

2.5 The United Nations common system of salaries, allowances and benefits

The United Nations has a common system of salaries allowances and benefits that is applied by the United Nations and its affiliated funds, programs and most of its specialized agencies including UNDP, UNFPA, UNOPS, UNHCR, UNICEF, UNRWA, ITC, ILO, FAO, WFP, UNESCO, WHO, ICAO, UPU, ITU, WMO, IMO, WIPO, IFAD, UNIDO, IAEA, UNWomen, ISA, UNAIDS, ITLOS, CTBTO. The International Monetary Fund and the World Bank Group are not part of the common system.

The information in this section is sourced from (International Civil Service Commision, 2014).

Many of the features of the common system apply to all staff members. Recruitment criteria, salaries, some allowances and structuring of remuneration may differ between two differ groups of groups of staff; professional and higher categories, and the General Service and other locally recruited categories.

2.5.1. The Professional and higher categories

The salary of the professional and higher categories consists of two main elements: a floor salary and post adjustment. The post adjustment is contrived in order to preserve comparable purchasing power for all duty stations.

The professional and higher categories incorporate five differ professional grades (P-1 to P-5), two Director levels (D-1 to D-2).

Increments within the grades are awarded on the basis of satisfactory service. Most increments are granted annually, however there is a two-year qualifying period for top step of level P-2, above step XIII of level P-3, above step XII of level P-4, above step X of level P-5, above step IV of the D-1 level and for all steps at the D-2 level.

Furthermore, in some organisations there is a language incentive. A salary increment may be granted at an increased rate of 10 to 20 months to staff with an

adequate and confirmed knowledge and use of a second official language of the United Nations.

3.0 Theory and Hypothesis

This chapter presents and examines types of agency problems and how they may affect bureaucrats in the United Nations. Then this thesis delves into a model of rent extraction presented by (Di Tella & Fisman, 2002)This model describes the bureaucrat as a hunter looking for available game. Lastly, a simplified version of the (Di Tella & Fisman, 2002) is examined and adapted to suit the purposes of the thesis. The simplified model is present in (Boyle & Rademaker, 2015)

3.1 The bureaucrat as a hunter.

Research done by (Di Tella & Fisman, 2002) study gubernatorial pay across the United States and question where politicians are like bureaucrats or if they exhibit rent extracting behaviour. Di Tella and Fisman write

"The salary that the governor is able to extract depends on the effort he exerts in lobbying the legislature and the level of funds available, just as a hunter's catch depends on the effort exerted in hunting and the amount of game in the area".

It is worth considering whether this rent-extraction process could exist for high-level bureaucrats in supranational organisations. If this is to hold it is necessary to assume that the rents that bureaucrats can obtain depend on the effort involved in extracting these rents and the availability of funds required to meet the wage demand of the bureaucrat. The model by Di Tella and Fisman is very rigorous and therefore a simplified model will be used to further discuss rent-extraction by "executive" bureaucrats.

3.3 A simplified model

The theory above can be expressed formally in a model adapted from (Di Tella & Fisman, 2002) and simplified by (Boyle & Rademaker, 2015). Let total executive compensation be denoted by C. Assumed that

$$C = F + P(W, L, e)$$

F: Fixed bureaucratic salary, constant

W: Per – capita wealth

L: Per- capita financial obligation imposed on rate payers

e: Effort exerted by the executive bureaucrat in extracting rents.

The

equation postulates that executive bureaucratic pay is equal to the sum of a fixed bureaucratic salary and a variable 'premium' component contingent on the bureaucrat's performance in value creation, minimising the financial burden on ratepayers and the rent-extraction efforts by bureaucrats. This thesis assumes

$$P_w \geq 0$$

$$P_L \leq 0$$

$$P_e > 0$$

The subscripts indicate partial derivatives. If the high-level bureaucrat is paid like a bureaucrat, then

$$P = P_w = P_L = e = 0$$

The optimal choice of effort, e, satisfies

$$P_e = 1$$

The model assumes that the high-level rent-extraction efforts has diminishing returns to scale.

$$P_{ee} < 0$$

Furthermore, it is assumed that the rent – extraction efforts are more effective when the ratepayers are financially affluent as well as when there is more available funds to distribute.

$$P_{ew} > 0$$

$$P_{eL} > 0$$

Taking the derivative of C with respect to W whilst incorporating the optimal choice of e, it is possible to find that

$$\frac{dC}{dW} = P_W - \frac{P_{eW}P_e}{P_{ee}} \geq 0$$

This equation states that if ratepayer wealth increases it raises bureaucrat "pay-for-performance" and allows for more rent-extraction. By take the derivative of C with respect to L whilst incorporating the optimal choice of e, it is possible to obtain

$$\frac{dC}{dL} = P_L - \frac{P_{eL}P_e}{P_{ee}} \gtreqless 0$$

The equation states that ratepayers punish greater revenue collection by bureaucrats, yet at the same time generating a larger pool of resources that can be acquired by these executives.

This thesis will run a regression on this model testing whether effort exerted by bureaucrats in lobbying for rents is zero. The results of this regression will be located in chapter 6.

4.0 Methodology

This chapter creates a synopsis of the research methodology applied and justifies the selection of research design and the methods used. Moreover, the following chapter reviews the research procedure along with the validity and limitations to the study.

4.1 Research Design

The purpose of the research design is to provide a detailed framework illustrating how the investigation will proceed. In order to address the research question, *"are high-level bureaucrats compensated through the United Nations common system of salaries, allowances and benefits paid like bureaucrats?",* an exploratory research design is evaluated to be the most appropriate.

An exploratory research design aims to ascertain the nature of problem as well as broaden the understanding of the research question. In R. B. Brown (2006) it is stated that exploratory research "tends to tackle new problems on which little or no previous research has been done"

In this study the research question asks whether observed pay structures indicated that high – level bureaucrats employed in the UN system are paid like bureaucrats. The larger question of whether agency considerations are present in supranational organisations and NGOs is left unaddressed.

Thorough an exploratory research design this thesis hopes to provide insight and understanding as well as start an academic discussion of corporate governance in non-corporate organisations at an international level. It is a field which previously has not been researched in detail.

By choosing an exploratory research design the study has the benefit of being flexible and adaptive to change. However, caution must be used in drawing any form determinative conclusions as the information provided by the study may be subject to interpretation which might be contingent on preconceived biases.

Although this is an exploratory study it will be conducted as methodically as possible in the hopes that it may spur future studies.

4.2 Research Methodology

An exploratory research design has been chosen. A blend of qualitative research and quantitative testing has been assessed to provide an in – depth understanding of the research question.

To be a able to understand the research question an quantitative empirical analysis is vital. The following regression is used to test the theoretical model against data.

$$Bureaucratic\ pay_{it} = \alpha_0 + \sum_i \beta_i\ Performance + \sum_j \gamma_j\ Controls + \varepsilon$$

The bureaucratic pay is the log of the bureaucrats pay. Performance is a measure of performance such as the *Log of revenue to the United Nations.* Controls is a set of control variables. ε is an i.i.d. error term.

The results can then be compared to the literature on executive compensation as well as similar regressions that use bureaucratic salaries as the dependent variable.

If the study finds that $\beta_{it} \neq 0$ it may indicates bureaucrats at the United Nations are not paid like bureaucrats. If this is the case more research is needed to investigate whether this is due to rent-seeking pay high-level bureaucrats.

4.3 Research procedure

The first stage of the research procedure embodied the collection of previous literature and background material appropriate to the research field. The United Nations Office of Human Resource Management was also contacted. The in-depth research into published literature and available information assisted the development of a specific research question. The literature and background material is classified as secondary data. It was analysed and used to create chapter 2: literature review and background information.

The second stage included researching the relevant theories that apply to the research question. Substantial parts of this stage are not included in the thesis, however stage two was necessary to build a cohesive and thorough study. The results of the second stage are presented in chapter 3: theories and hypothesis.

The third stages involve data collecting and testing. The theoretical model is testing empirically to see if it can provide insights into the research question. Lastly, the fourth stage concludes with the analysis and processing of the results of the third stage.

Appendices

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