

A Project Report
on
Social Health Insurance

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ABSTRACT

Health insurance is one of the ways that people in various countries finance their medical needs. It is estimated that out-of-pocket expenditure of over 15–20 % of total health expenditure or 40 % of household net income of subsistence needs can lead to financial catastrophe. When people on low incomes with no financial risk protection fall ill, they face a dilemma: they can use health services and suffer further impoverishment in paying for them, or they can forego services, remain ill, and risk being unable to work or function. Variation in financing and organization structures in various countries notwithstanding, there is now nearly a unanimous commitment to assuring universal access to medically necessary care in high-income countries. Internationally, health insurance serves to improve service utilization and protect households against impoverishment from out-of-pocket expenditures. Analysis of how health insurance schemes function in a particular country, especially in relation to other funding aspects and health outcomes, can provide a glimpse of the performance of the whole healthcare system. Because there are people in the village who will not be able to do health insurance every year because of money problem.

And we want that it should be beneficial to all those who have money problem and we are going to work on it through app or website

CHAPTER 1

INTRODUCTION

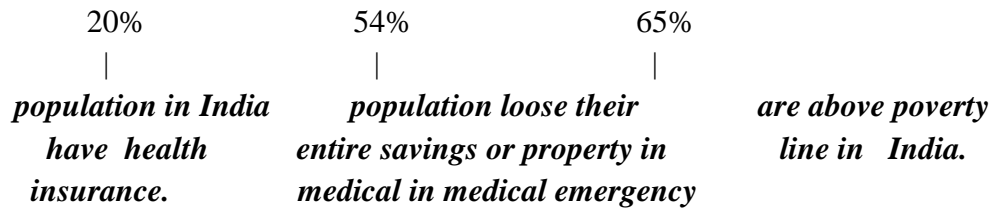
Many people and organizations today have a new or renewed interest in project management. In the past, project management primarily focused on providing schedule and resource data to top management in just a few industries, such as the military and construction industries. Today's project management involves much more, and people in every industry and every country manage projects. New technologies have become a significant factor in many businesses, and the use of interdisciplinary and global work teams has radically changed the work environment. The facts below demonstrate the significance of project management in general:

- In 2011, the average annual salary (excluding bonuses, in U.S. dollars) for someone in the project management profession was \$160,409 in Switzerland (the highest-paid country), \$139,497 in Australia, \$105,000 in the United States, and \$23,207 in China (the lowest-paid country). This survey was based on self-reported data from more than 30,000 practitioners in 29 countries.¹
- CareerBuilder.com found that 44% of U.S. employers listed project management as a skill they looked for in new college graduates, behind only communication and technical skills.²
- Employers throughout the world, especially in Australia and Canada, echo the same request.
- Project management certification continues to be one of the most popular certifications throughout the world.
- The U.S. spends \$2.3 trillion on projects every year, and the world as a whole spends nearly \$10 trillion on projects of all kinds. Projects, therefore, account for about one fourth of the U.S. and the world's gross domestic product.

Social health insurance, The last three decades have brought about substantial improvements in life expectancy in low/middle-income countries (LMIC) as a result of medical innovation, improved health behaviours and better access to care.¹ Although these achievements should be celebrated, they have also led to an increase in the burden of chronic illness.^{2 3} Illnesses such as heart disease and cancers, which were thought of as predominantly developed country illnesses, are on the rise throughout the developing world. For example, over two-thirds of deaths from cardiovascular disease now occur in LMICs.⁴ Efforts by LMICs and global health practitioners have largely focused on preventing chronic illness. Primary care and prevention are certainly important for controlling the spread of chronic illness, but not all illnesses can be prevented.

CHAPTER 2

LITERATURE SURVEY



Number of persons covered under various schemes such as government sponsored, group insurance, family insurance, individual policies is portrayed. Sector wise health insurance policies along with number of persons covered by public, private and specialized insurers are depicted. Suggestions of the study are for government to introduce new health insurance schemes for welfare of the common people. The Insurance Regularity and Development Authority (IRDA) is suggested to take initiatives to promote competition in health insurers as available in telecom service providers. Government is also advised to conduct awareness campaigns to inform people about benefits of taking health insurance policies.

Binny, Dr. Meenu Gupta (2017), Health insurance in India- Opportunities and challenges. The paper is about present trends of health insurance sector in India. Growth opportunities and challenges in the sector are identified. The study is of the opinion that health insurance is a growing sector in India. Companies are required to enhance their business by introduction of new business models with innovative products. Need of a universal health insurance program is recognized to cover families below poverty line. Medical tourism is also a growing business in India and health insurance companies can take advantage of this sector to enhance business. The sector is also advised to have a common information bank for information sharing which may help customers in assessment of prices, quality and services provided by health insurance companies.

BC Lakshmana, P Jayarami Reddy, P Sravan Kumar (2019), Operational efficiency of selected general insurance companies in India. The study is conducted on selected general insurance companies regarding pattern of insurance premium, claim settlement procedure and evaluate performance of companies. In percentage analysis of the insurance premium collected by both

public and private sector insurance companies showed a significant growth from 13.55% to 24.29% during the years 2011 to 2013 which later decreased to 13.42% in the year 2018. Average growth rate during the years 2010 to 2018 was 13.85%. After the study was conducted it was observed that public sector general insurance providers required new and innovative products in order to compete with their private counterparts. IRDA, being a regulatory authority of the sector was suggested to formulate standard policies and benchmarks to be followed by both public and private sector players.

Health insurance in India- An overview. The paper highlights the concept and benefits of health insurance besides presenting an overview of health insurance sector in India. A brief of Iamandalam MS and Star Health are given that have eliminated Third Party Administrators (TPAs) and have opted for direct settlement of claims. As per study, insurers now have started visiting hospitals to meet patients for claims in the category of group insurance. If any fault is found then policy renewal is stopped. There are also pre-agreed rates for surgeries and treatments which prevents differential charging of tariffs. Other problems like high claim pay-out ratio in public sector insurers, unprofessionalism of TPAs, lack of development of health insurance in rural areas, wrong selection of health insurance policies, and lack of awareness about health insurance policies are highlighted.

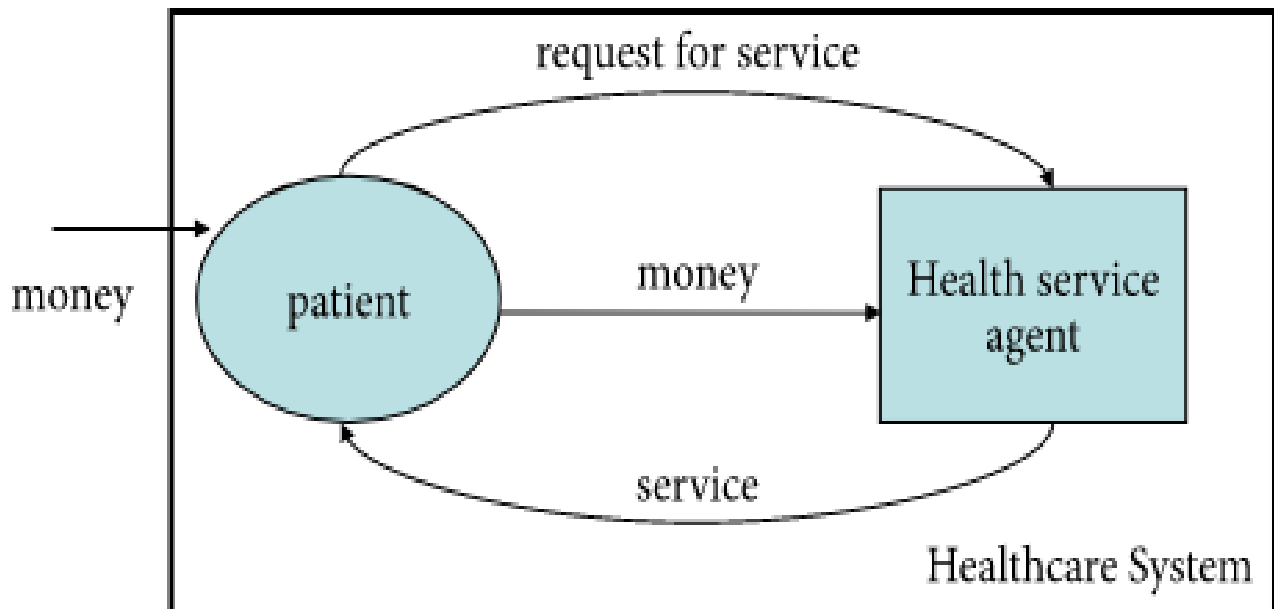
CHAPTER 3

SYSTEM ANALYSIS

The healthcare systems can be organized at the level of the state in various ways. Below, the main types of the healthcare systems are briefly recalled. The more detailed description of the general properties of the considered primary systems can be found in Bielecki & Stocki [11]. In this paper their properties from the game theory point of view are analysed. Before starting the cybernetic analysis of healthcare systems, it should be stressed that energy, in cybernetics meaning, is the means that enable the system to sustain its existence and perform actions. In the healthcare system, apart from physical energy, for example, electricity and heating necessary for the hospitals functioning and money play the role of energy.

4.1. Type 1: The Residual System

In this type of healthcare systems medical services are fully and immediately paid by the patients and, in return for this, they are provided immediately, as well. In the clear primary system of this type all medical facilities are private. In the residual healthcare system medical service is simply a good, which can be bought or not, depending on the patient's own decision. Contemporary, this kind of healthcare system dominates in dentistry and veterinary. Historically, it was characteristic for most European countries in the 19th century. A scheme of flows of demands, services, and money in such system is presented in Figure



Sr. No.	Activity /Objective	Duration
1.	Making of website/App	1 month
2.	Tie up with hospital and bank	2 months
3.	setting up the data and stabilizing the entire system	15 days

CHAPTER 4

Required tools & Libraries

- Health Insurance mobile app models
- The advantages of medical insurance apps

Fitting the existing health care regulation

The best app to manage health insurance

Advances in medical sciences have lifted the life expectancy significantly in the last few decades. However, changing lifestyle and external factors have resulted in individuals – especially in urban areas – living longer, but less healthier today. Instances of accidents are on rise as a consequence of growing number of vehicles and there has been significant rise in the medical disorders due to new-age lifestyle – known as lifestyle disorders. Everyone – from newborn children to elderly senior citizens – is more vulnerable to hospitalization today than they were a few years ago.

An individual who is looking for a health insurance plan during his/her early phase of life should always go for a health cover above 3 lakhs. This will help them get the much needed coverage to deal with the expenses due to illness if any. Also, at an early age there are low chances of you registering a claim, which means you are highly probable to enjoy the no claim bonus or cumulative bonuses, which means your sum insured will rise year on year upto 200%

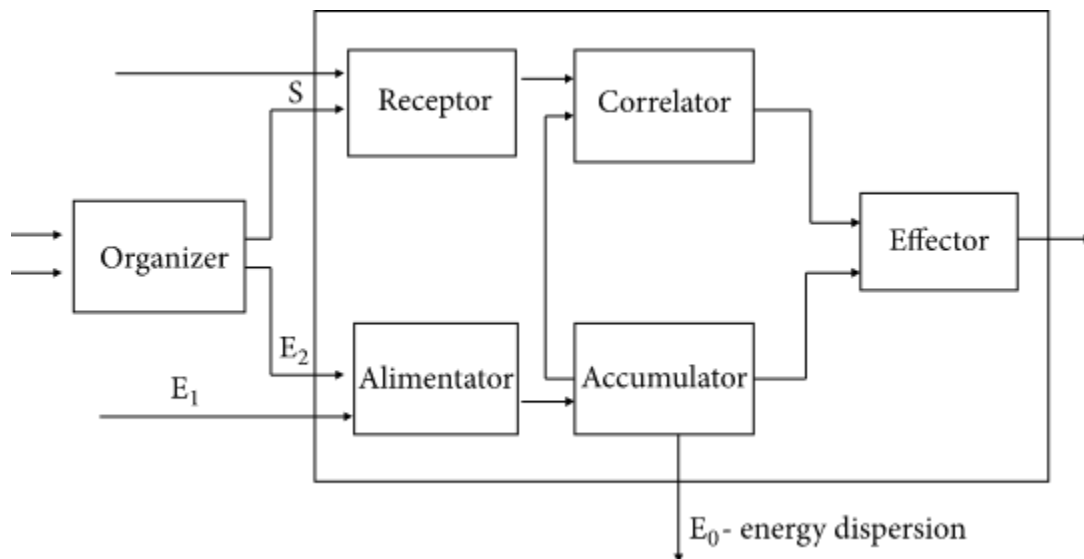
Meanwhile, with medical inflation estimated at 15% per annum, the cost of healthcare has been rising steadily since last one decade or so. With rising healthcare costs, not having a Health Insurance irrespective of an individual's age – can be risky. You can never be sure when an illness will strike, leaving you with huge medical bills. If not prepared, a single instance of hospitalization can very well disturb a family's well-calculated budget. Amid such possibilities, having a Health Insurance policy is of utmost importance to cover you and your family against any emergency medical situation.

Well, having a Health Insurance policy is good, but it is the basic requirement. It is equally important to have an optimal mix of coverage to have to get the most out of a Health Insurance policy.

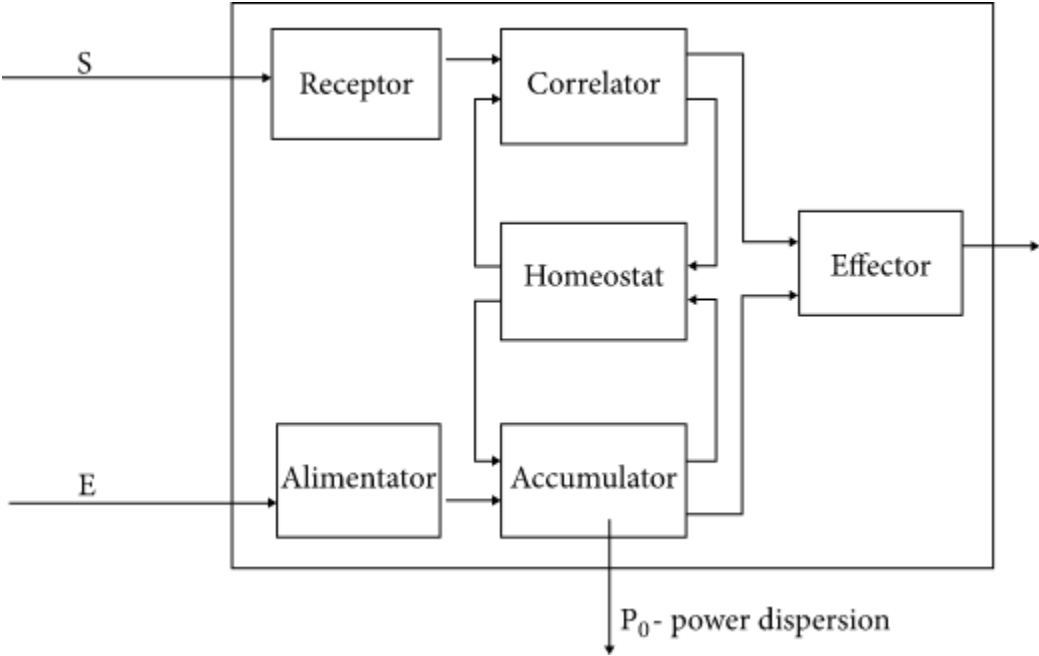
The Mazur's autonomous systems theory and the multiagent systems theory constitute the theoretical basis of the analysis presented in the next section. Let us present a very brief outline of the autonomous system theory of Mazur [16, 17]. The more detailed presentation of the theory in the English language can be found in Bielecki & Stocki [11] and in Bielecki [18].

Let us recall a few definitions. The *receptor* is an input module responsible for transmitting signals from the milieu. The *alimentator* is an input module responsible for possessing resources from the milieu. The *effector* is an output module responsible for generating reactions of the system. The *accumulator* is a module responsible for storing and processing energy. The *correlator* is a module responsible for generating information on the basis of the signals received from the receptor. The *homeostat* is a module responsible for keeping the system in functional balance.

The system is equipped with a receptor, alimentator, accumulator, and correlator. In a controllable system, the outer organizer's role is to keep the system in functional balance and to set the goals. The outer organizer also controls the system by means of the correlator, for instance, by introducing an algorithm to the correlator.



It is a controllable system equipped with the homeostat. The autonomous system is an organizer for itself. It is both a controlling and controlled unit which means that the autonomous system has self-controlling abilities. They are realized by ensuring functional balance in the system. The balance is kept by using a set of negative feedback loops. Such control mechanism is called homeostasis, Cannon [19]. Counteracting the factors which lead to the autonomous system disorganization is the effect of presence homeostatic control mechanisms.



CHAPTER 5

Problem Formulation

- **54% people lose their real estate due to of health issue.**
- **High percentage of people lose their due to lack collateral.**
- **Half of the population are unaware of insurance policy and this industry which is helpful for all.**

Instant money support is like impossible in many situations and the only door which open during emergency is selling out the belongings which is saved

when Habiba Abdelaal arrived at Ohio University in the summer of 2017, worrying about health insurance didn't cross her mind. Abdelaal was enjoying what the city of Athens had to offer — food, nightlife and new friends. She believed in the American dream and had dabbled in the idea of staying in America after getting her master's degree in engineering.

CHAPTER 6

Proposed System

What we offer!

Instant credit at lowest
interest rate at selected
Hospitals

24 x 7 medical coverage

No hidden and opportunity
cost of medical insurance.

Let us put forward the proposed methodology of the analysis of complex systems which consist of various types of agents interacting mutually. The following steps of the analysis should be conducted. (1) Specification of the types of agents which act in the system in the context of their functionalities. (2) Analysis of the properties of the specified types of the agents. In particular, what sort of system according to Mazur's theory represents a given agent, i.e., whether it is an autonomous system, or rather fully or partially controlled, and how the agent's inner modules (correlator, accumulator, and homeostat) are organized. (3) Analysis of the aims of the individual types of agents, both the tactical (short-term) aims and the strategic (long-term) ones. (4) Specification of relations and interactions between agents, in particular, (a) specification of flows of the means, (b) specification of flows of energy, (c) specification of services, (d) specification of controls, (e) specification of demands specified between agents. The enumerated specification can be presented as a chart of flows, which is a common method used in cybernetics. (5) Analysis of the relations and interactions specified above, among other analyses of the energy dissipation in individual flows and delay in flows, services and controls. (6) Analysis of the whole system, among others, (a) what sort of the system, according to Mazur's theory, is the whole system, (b) whether there exists privileged agents in the system, (c) whether the whole system is cooperative or not, i.e., whether individual agents cooperate or compete, (d) payoff type of the game, i.e., if the whole system, which is considered in its dynamics as a game, is a zero-sum game or a negative-sum game, (e) stability of the whole system, in particular, whether there exist positive feedback loops in the system, which are destroying unless they are controlled, in particular by subordination to a controlling negative feedback loop.

The specified approach allows the researcher to identify the sources of pathologies in the system and, as a consequence, to work out the way they can be removed.

Discussion

As it has been mentioned at the beginning of this paper, all the existing healthcare systems suffer from numerous pathologies. It turns out that the sources of these pathologies can be analysed effectively from the cybernetic point of view, for all types of political, economic, and social conditions. Thus, the healthcare systems are analysed as systems of interacting agents that are considered in the frame of Mazur's theory. The properties of the whole system are studied from game theory point of view which is generalized in comparison with its classical form. Thus, in order to carry out the analysis, the types of agents and relations between them have to be specified. The relations consist in flowing of demands, controls such as rule specification, pieces of information, services, and matter and means (energy). Dissipation of means in the system is analysed. This dissipation depends on the degree of the game cooperativeness. If both tactical and strategic aims of all agents are consonant then the game is fully cooperative and energy is not wasted for rivalry between agents of various types. As a consequence, the system is stable and robust, i.e., resistant to external disorders. Existence of middle agents is another source of energy dissipation. The functionality of agents and the whole system, i.e., the degree of their autonomy (in cybernetic meaning), is considered as well. The fact that agents have aims which are mutually contradictory is one of the main sources of the healthcare systems drawbacks and can be observed in all current healthcare systems. Central overcontrol on various levels of management causes other pathologies which obstruct the agents' initiative and possibility in choice of strategy. This, among others, violates patients' subjectivity. Furthermore, central overcontrol causes delays in controls, services, and means flows. The summary of the properties of the analysed healthcare systems, i.e., the main types of the existing ones and the hypothetic participative system proposed by Bielecki & Stocki [11], is specified in Table [1](#). Let us use the presented approach to diagnose the pathologies which exist in the specified systems.

CONCLUSION

Modern tools built into medical insurance applications can automate processes, easing the effect of inefficiencies and optimizing both personnel and systems utilization. Applied wisely, they must turn out instrumental in simplifying internal IT architecture and establishing standardized processes.

Simplification of complex workflows and acquisition of the right information for optimum decision-making are among the expected positive outcomes of automation. Modernization of the legacy systems can lead to an increase in the number of transactions handled and the volume of papers generated in a digital format daily. Then, companies will be able to focus on customer retention, acquisition of new customers, new product delivery, and quality assurance of the services they provide. Besides, paper removal and focus on case management automation can support the cost and settlement timeframes reduction.

2. Customer base growth - Automation of the processes related to insurance services delivery also results in overall customer management improvement. Effective and efficient technology-enabled customer service is easier to ensure when all the necessary data can be accessed and managed through the power of the back-office functions. Critical information like data on policy processing, billing, or claims must be readily available when an insurer works on a case or communicates with a client.

Naturally, the number of people using the insurance app will increase. However, the health insurance app has to do a bit more than merely exist to help insurers reach broader audiences. The health insurance application for insurance companies needs to be designed in such a way to decrease customer request-response time, optimize turnaround time, improve consistency, and provide all the critical metrics that allow evaluating customer service quality.

In this paper, a comprehensive and universal system of analyzing functional healthcare properties at the state level has been proposed. By treating individual entities and health service institutions as agents within the framework of the theory of autonomous systems, the proposed methodology allows the analysis of functional properties of individual agents. In addition, relationships and processes between individual agents are analyzed as well. The aforementioned theory of autonomous systems is supplemented by an original method of analyzing the global properties of the entire system using modified version of game theory. In this version, not only the payment table of individual participants is taken into consideration, but also the analysis of the stability of the entire game, the degree of its cooperativeness, and dissipation of energy is carried out. The proposed method allows for quick detection not only of individual dysfunctions of the whole system, but also to know their causes and, consequently, to suggest ways to remove them. The proposed approach was used to analyze the main types of existing healthcare systems and allowed indicating their dysfunctions. It also served to propose a hypothetical, optimal model for the organization of healthcare at the state level.

It should be emphasized that the proposed approach is universal and can therefore be used to analyze other complex systems, such as education system, energy system, and communication system.

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