# **2.0 Research Methodology**

As inductive approach will be used as the main approach according to which the research is conducted, research techniques such as, questionnaires, interviews, case studies, observations and document reviews are appropriately collaborated. To make the research more in depth and productive a combination of quantitative and qualitative methodologies will be employed as the research style. Moreover the emphasis of quantitative research is on collecting and analyzing numerical data. The design initially is usually highly detailed, structured and results can be easily collected and will be presented statistically.

On the other hand qualitative research is more subjective in nature than quantitative research and involves examining and reflecting on the less tangible aspects of a research subject. Interviews observation of workflow in sites is examples for qualitative methods which will be used in the project. Such a combination would allow the researcher to discern the techno-economic implications of a smartphone based solution for motor vehicle claim settlement procedure.

# **2.1 Research Design**

# **2.2 Primary Data Spotlight and Actors**

Since proposed software solution is intended for the use of any motor vehicle insurance companies, several leading insurance companies who provides motor vehicle insurances are selected as locations to collect essential information required to develop the system. Several employees from managerial positions to ground level employees who deal with the extant system at daily basis will be targeted.

# **2.3 Data Collection Protocols**

Following methods are supposed to be used in the data collection process in order to gather quality quantitative and qualitative data required for designing the requirement specification for the new system.

# **2.3.1 Questionnaires**

Primary data is collected through questionnaires. Questionnaires facilitate the collection of data by asking a sample of people, to respond to the same questions. Questionnaires will be prepared such that they are short as possible and include all the questions which need to cover subject areas and they will be distributed among the employees who are directly involved with the claim settlement procedure to gather information regarding the extant procedure and their opinions of it and the proposed solution.

# **2.3.2 Interviews**

Interviews are another effective method used to collect data and ideas of the clients since it enables the researcher to get instant feedback and allow to ask follow up questions. Focus groups are used to gather data, usually in the forms of opinions, from a selected group of people on a particular and pre-determined topic. Interview types such as Face to face (Individual, Group), online (Chat, Skype) and over the phone will be used according to the availability of the clients. As the clients wide range of officials from managerial positions to ground level employees who deal with the extant system at daily basis will be selected. Apart from officials from companies, some of the clients will be interviewed in order to obtain the realistic picture of the extant system.

# **2.3.3 Observations**

As a data gathering method in this research project, visiting work sites and observing the work process is also included. It can be used in association with other research approaches or as the primary way of gathering qualitative data. It would be greatly helpful participating in a live claim settlement procedure in order to understand the extant procedures field work as well to understand the data flow within the organization.

# **2.3.4 Document Reviews**

Documentary analysis is chosen in this research as it involves a variety of sources and is expected to yield reliable data. This will help to get an idea about what kind of data should be stored in the database and their relationships with each other. Collected data will greatly aid in designing the central database for the system.

# **2.4 Data Analysis**

In order to develop a successful system, gathered data must be analyzed in a proper way. Quantitative data gathered will be analyzed using software such as Microsoft Excel. Various graphs and charts will be produced using quantitative data analyzing software. On the other hand data gathered using qualitative methods such as interviews will be analyzed using previous experience of the researcher and by identifying patterns and categorizing the data according to the prescheduled criteria.

# **2.5 Ethical Overview**

In the proposed system, various confidential information related to the policies and personal information of the employees and customers will be stored in the database. It is guaranteed that all the gathered information is secured and will only be used for system purposes.

Throughout the data collection process maximum priority will be given to meeting highest ethical standards of research. Data security will be a high priority and anonymity of data will be protected at all costs. At the research initiation, participants will be fully briefed regarding their liberties, obligations and will be given a detailed explanations of how their responses are going to be used. They will be given the opportunity to withdraw from the research at any time. All data collection procedures will be conducted only after obtaining informed consent from the authorities of the company and relevant parties.