**4.2.1 Lack of manpower**

As Bangladesh Railway is a very important organization, it needs a good amount of manpower to ensure quality service for the passengers. While recognizing the needs, we found that there is a shortage of skilled manpower in rail sector which hampers the essential activities of the organization.

While doing initial feasibility study, an alternative to increased manpower was also proposed. That is, digitalizing some of the subsystems. Increasing manpower is very essential in some of the sectors. But in some sectors, digitalization of the system can also solve the problem. For example, in some technical fields, a digitalized system can replace a good amount of manpower. The need of pointsman can decrease significantly if the current system is digitalized. But, this is also a fact that, for some of the sectors like cleaning and security service, digitalization of the system cannot solve the problem and for that increasing manpower is the only one solution.

However, we cannot afford both the solutions at a time. So, a conclusion is to be made which of the two will be more feasible. We have made a weighted candidate evaluation matrix to show the effects if the number of employee is increased versus if some of the systems are digitalized.

In this matrix, we have considered efficiency and propriety in performance section and in the cost section we have considered salary, installation cost and long term cost. We have given 4, 5, 4, 4 and 5 to efficiency, propriety, salary, installation cost and long term cost as weighting factor respectively. We also rated the criteria and then we multiplied the rating and weighting factor to give them scores. In total we can see that the score of increased man power is more than digitalized subsystems. So it is more essential to increase the manpower of Bangladesh Railway.

Table 4.1: Weighted candidate evaluation matrix for increased manpower versus digitalized subsystems.

|  |  |  |  |
| --- | --- | --- | --- |
| **Evaluation Criteria** | **Weighting Factor** | **Increased manpower**    **Rating Score** | **Digitalizing some**  **Subsystems**  **Rating Score** |
| **Performance**  Efficiency  Propriety | 4  5 | 4 16  5 25 | 4 16  3 15 |
| **Cost**  Salary  Installation Cost  Long Term Cost | 4  4  5 | 3 12  4 16  3 15 | 4 16  2 08  4 20 |
| Total Score |  | 84 | 75 |