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# A Case Study on Changing Business Environment at Cochin Port Trust

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*Abstract: This paper tries to study the present situation of Cochin Port Trust which is one of the major ports India .The study identifies the poor capability of Cochin Port Trust to respond effectively to change in business opportunity. This port contributed a lot towards the development of the country and the Kerala state and the state looking forwards the port trust for further development of the state. The detailed study on the various department of Cochin Port Trust it was identified that the present situation is not favorable for any organization especially the industries which can contribute towards the economic development of the country. The policies of the Central government and the inefficiency in the management created a situation that port is running at net loss of 86 crores. The present management structure of Cochin Port Trusts will not be able to make a positive change in working atmosphere, Effective utilization of natural resources, and there by contributing the issue of unemployment in the country . So the industrial training report proposing a change in organization structure of Cochin Port Trust. For the further development of the port it is very important that the employees of the Cochin port should come forward and should offer their maximum effort, which they are not doing at the present situation. After a detailed study on Dry dock workshop of Cochin Port trust it is identified that this department can contribute to the revenue of Cochin Port Trust. Presence of International Container Transshipment Terminal ICTT Vallarpadam, Central Government is planning waive the cabotage rule for ICTT Vallarpadam, proposed Vihinjam Port are the some open opportunity in front of the port trust. This offers a scope of ship repairing hub in Cochin Port Trust with business collaboration with Cochin Shipyards.*

**Index Terms—** Cabotage Rule, DP World, ICTT Vallarpadam, Cause and Effect Diagram, Pareto Chart.

## I. INTRODUCTION

This paper tries to study the present situation of Cochin Port Trust which is one of the major ports India .The paper studies the capability of Cochin Port Trust [1] to respond effectively to change in business opportunity. This port contributed a lot towards the development of the country and the Kerala state and the state looking forwards the port trust for further development of the state .The development of International Container transshipment terminal at Cochin, LNG Regasification terminal at cochin are the two main projects [3] which are capable to contribute a lot towards the economic development of the state Kerala and India. In the 11th five year plan country expected a GDP growth of 8.33% but able to achieve only 7.94% [2].By considering the factor of global recession and unemployment all-around the world the country has to give a good attention to reduce unemployment in India According to planning commission of India to sustain the GDP growth of India it is very important that the country has to take necessary steps to monitor, invest money in to the infrastructure development of the country in the following areas like Electricity, Roads and Bridged, Ports, Telecom, Irrigation [2] etc.

## II. AN OVERVIEW ON COCHIN PORT TRUST

### A. Financial Position

The profit and loss account for 2010-11 closed with a deficit of Rs.8609 lakhs shown in Fig 1. The operating income increased by 18.96% to Rs.27608 lakhs during 2010-11 from Rs.23208 lakhs during 2009-10. The operating expenditure increased from Rs.23295 lakhs in 2009-10 to Rs.27450 lakhs in 2010-11 registering an increase of 17.83% [1].The trend in financial position for the last five years are also shown in Fig 2.



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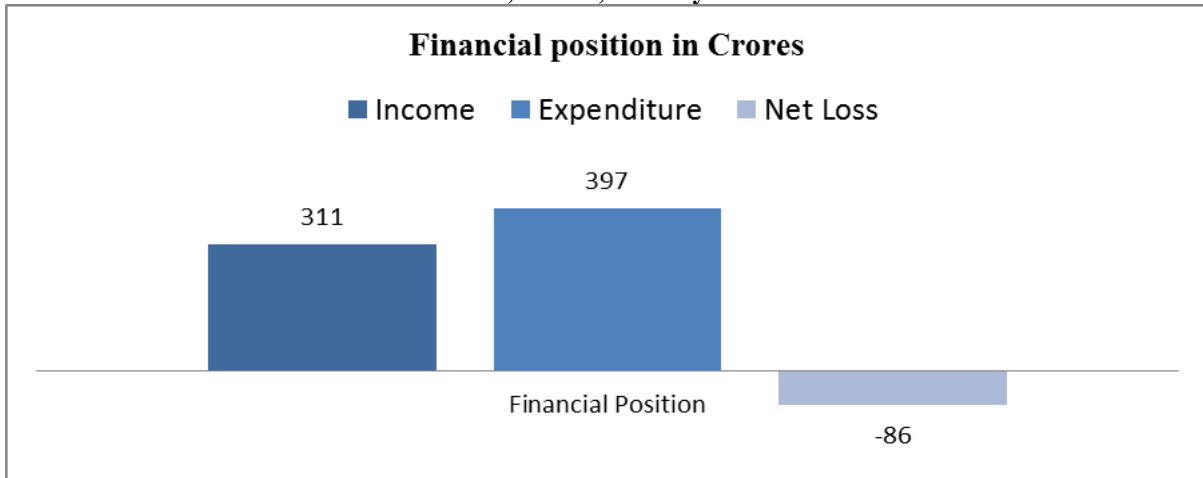


Fig 1: Financial Positions 2010-2011

Source: Administrative Report 2010-2011

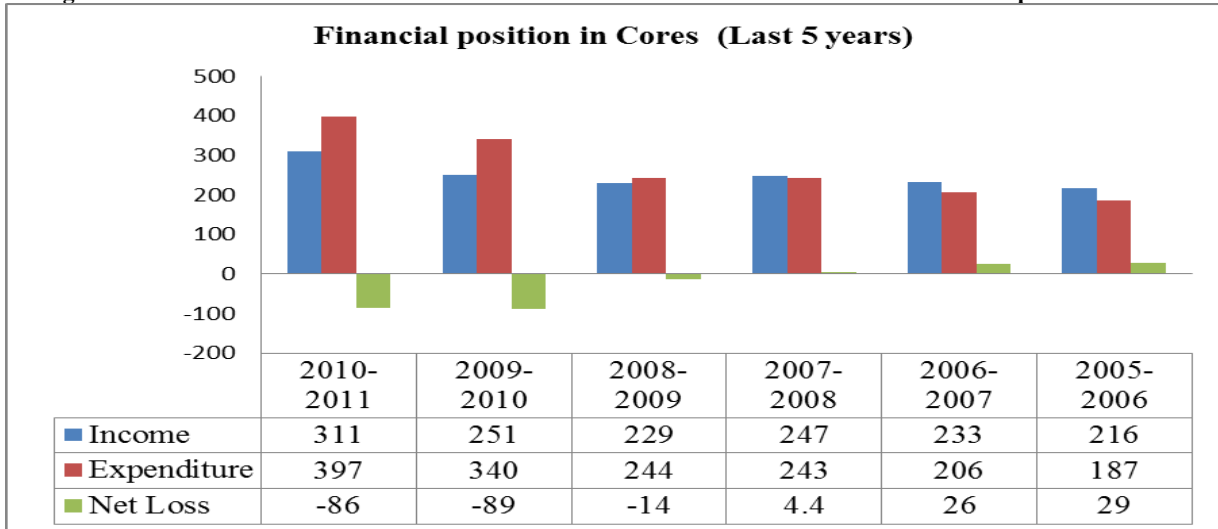


Fig 2: Financial Positions in cores last 5-years

Source: Administrative Report 2005-2011

**B. Traffic Handled**

The total traffic handled by Cochin Port Trust during the year recorded an increase of 2.25% to 178.73 lakhs tones as against 174.29 lakhs tones handled in the preceding year [1] as shown in Fig 3.

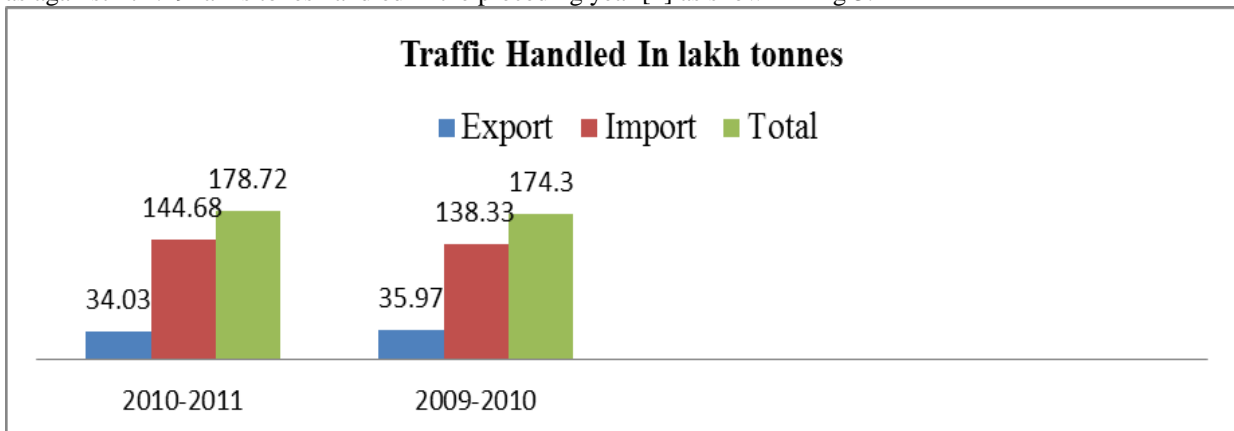


Fig 3: Traffic handled in Cochin Port Trust. A comparison

Source: Administrative Report 2010-2011

Following two figures Fig 4 and Fig 5 illustrate the composition of cargo and type of cargo handled through Cochin port for the last year [1].



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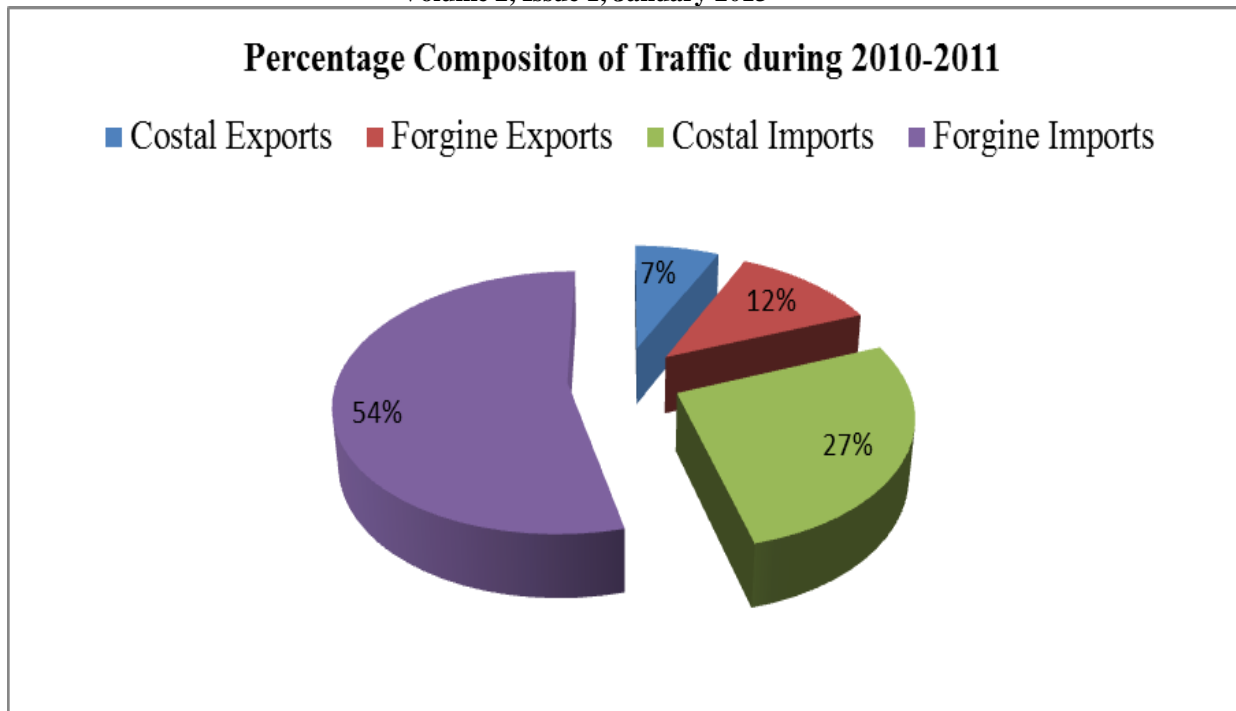


Fig 4: Percentage Composition of Traffic during 2010-2011

Source: Administrative Report 2010-2011

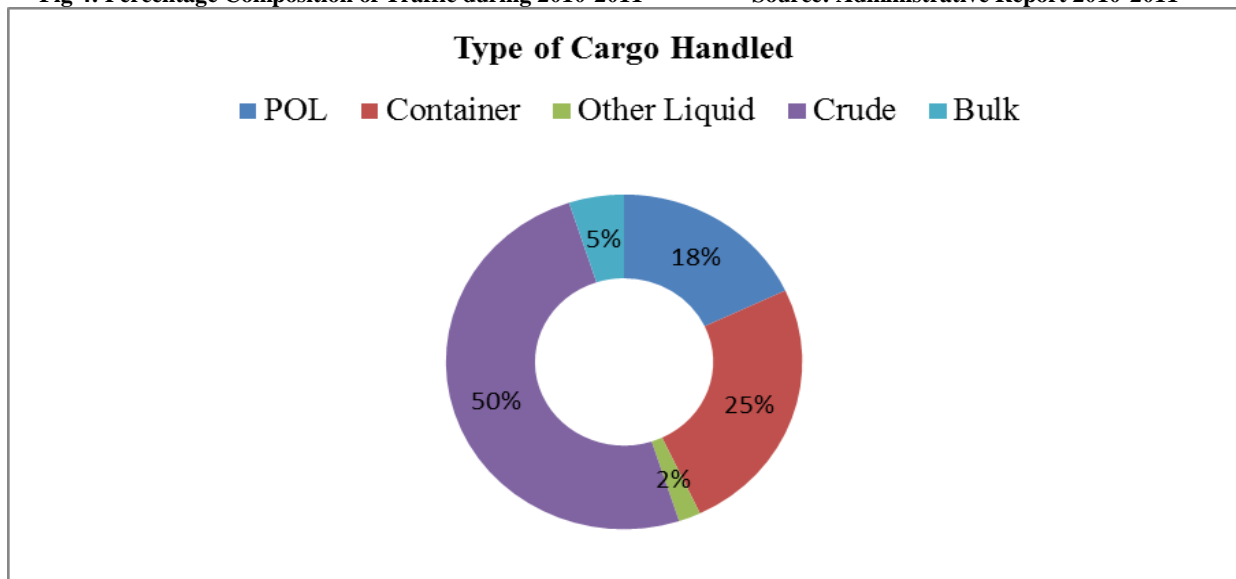


Fig 5: Type of cargo handled during 2010-2011

Source: Administrative Report 2010-2011

### III. IDENTIFYING CAUSES OF POOR FINANCIAL AND TRAFFIC PERFORMANCE

#### A. The Taguchi Philosophy

According to Taguchi “Quality is the loss imparted to the society from the time a product is shipped” Typical example for loss to the society include failure to meet the customer requirements and unsatisfactory performance that leads to loss of goodwill and reduced market share and failure of an organization etc. Cause and effect diagram shown in Fig 6 identifies the causes for the above problem.

Cause-and-effect diagrams can reveal key relationships among various variables, and the possible causes provide additional insight into process behavior. In this study a cause and Effect diagram is created to analyzing the effect of various causes. And it also studies how these will create an effect of loss to the society.

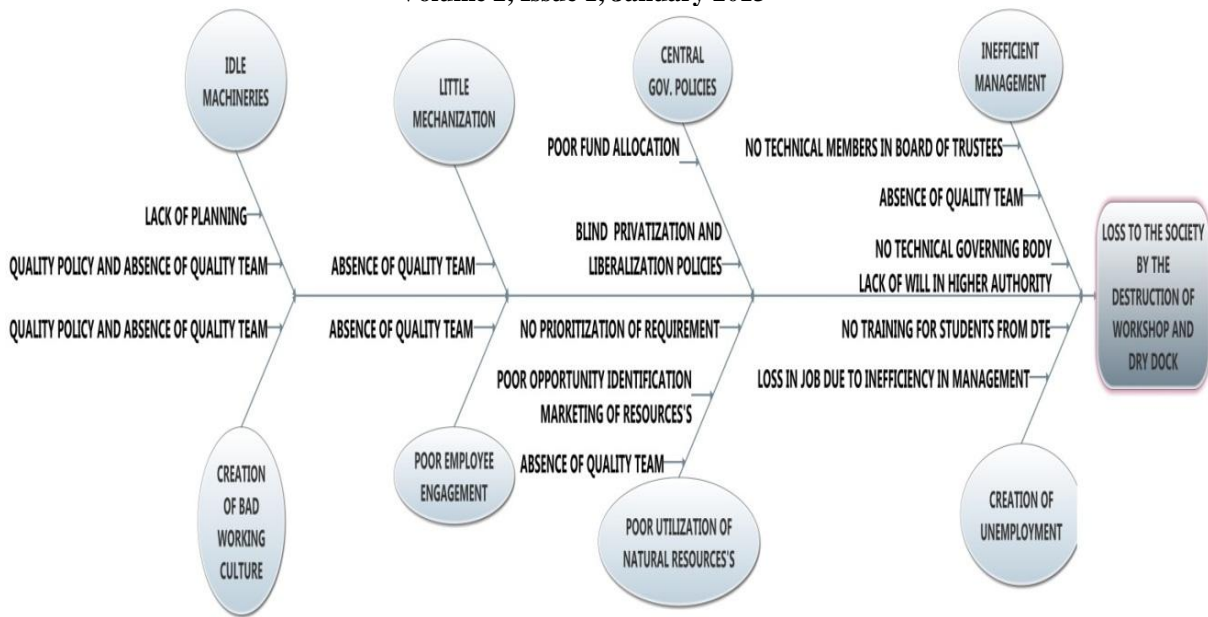


Fig 6: Causes and Effect Diagram

#### IV. ANALYZING THE CAUSES

##### A. Central Government policies

BOT contract for establishing the International Container Transshipment Terminal (ICTT) has been executed with the BOT operator M/s India Gateway Terminal Private Limited (IGT), a subsidiary of M/s Dubai port World (DPW) on 31.1.2005. The existing Rajiv Gandhi Container Terminal (RGCT) taken over by M/s IGT on 1st April 2005 till the commencing of new terminal at Vallarpadam. The total project cost of ICTT is 3000 Crores [1]. Cochin Port Trust is only eligible for 33% of revenue from this project. The remaining 66% will go to DP world. Fig 7 shows the breakup of fund sanctioned by central government for the ICTT project.

The main two issues identified as the part of this study on this agreement they are,

- After the commencement of operation in ICTT at Vallarpadam the same will be operated by DPW for the coming 30 years. For these 30 years the Cochin Port Trust is not allowed to use the RGCT for handling the containers. It will be huge loss to the nation.
- The dredging of Outer Channel, Inner Channel including the premises of the ICTT berth is coming under the responsibility of the Cochin Port Trust. Cochin port Trust has only one dredger called Nehru Shatabdi with very limited capacity. At the present situation the dredging cost will be a great liability for the port trust. The last year Cochin Port paid around 90 crores to a third party towards the dredging cost.

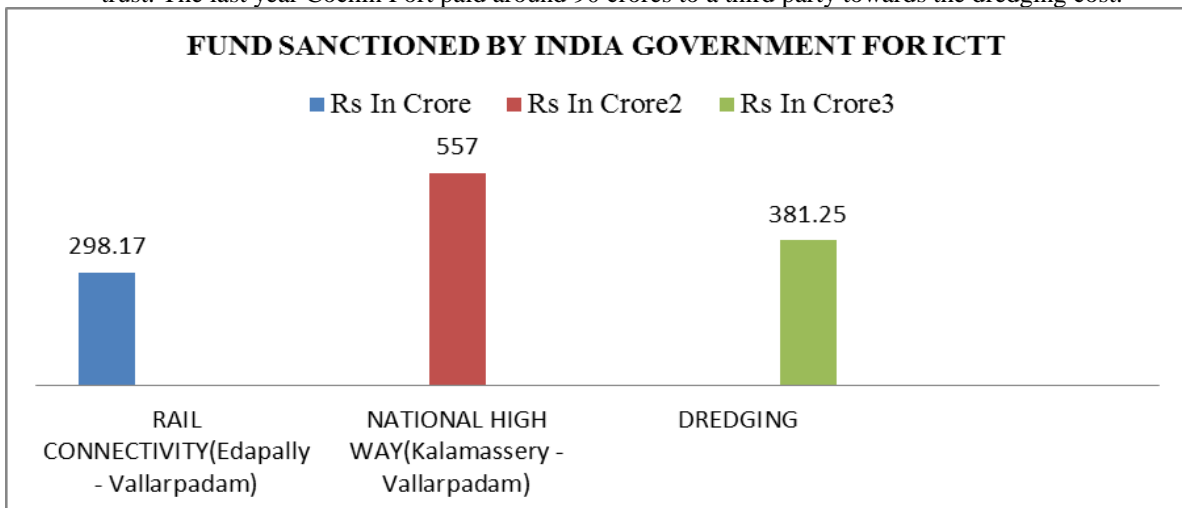


Fig 7: Fund sanctioned by the India Government

Source: Administrative Report 2010-11



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Concluding this discussion by identifying the factors that, Government should raise more fund for the development of our public sector companies .Government has to more vigilant in their policies on privatization. While privatizing the national assets it should be favorable for national interest.

**B. Creation of Unemployment**

Unemployment is the world's fastest-rising worry, Corruption and poverty still ranked the highest. Issues associated with inflation, such as higher food and energy prices are some of the issue should be addressed by Governments of all country. For country like India even though GDP growth is either increasing or showing a steady growth [6]. The percentage of unemployed people in the Country is still increasing. The following figures will give an idea about this situation.

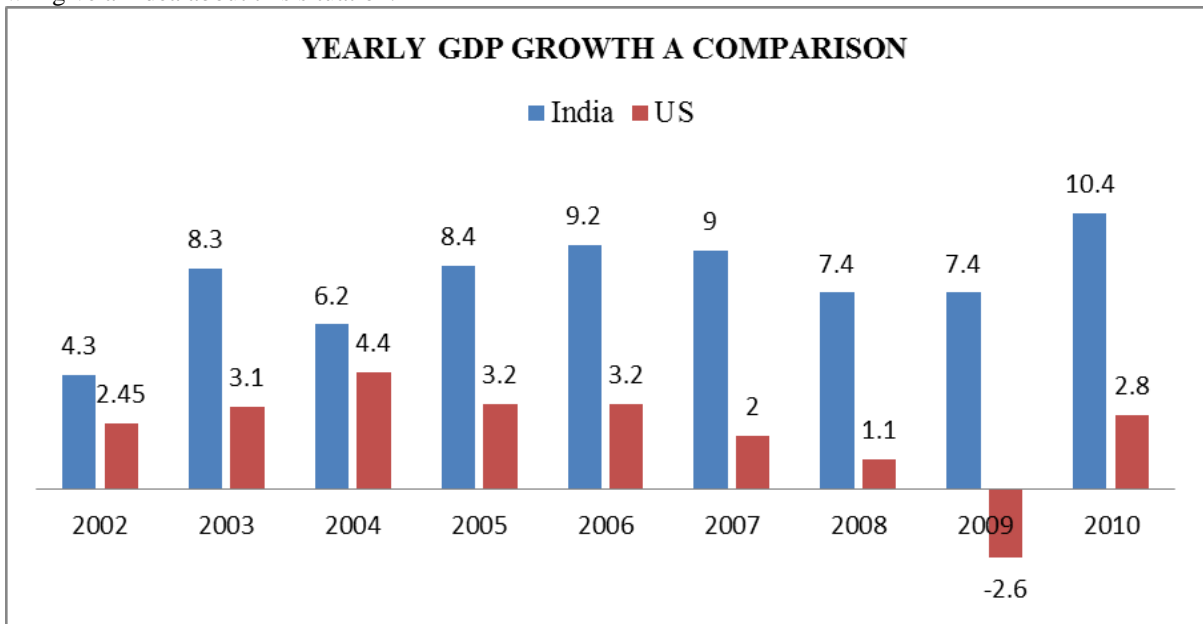


Fig 7: Yearly GDP growth rate

Source: Website [www.indexmundi.com](http://www.indexmundi.com)

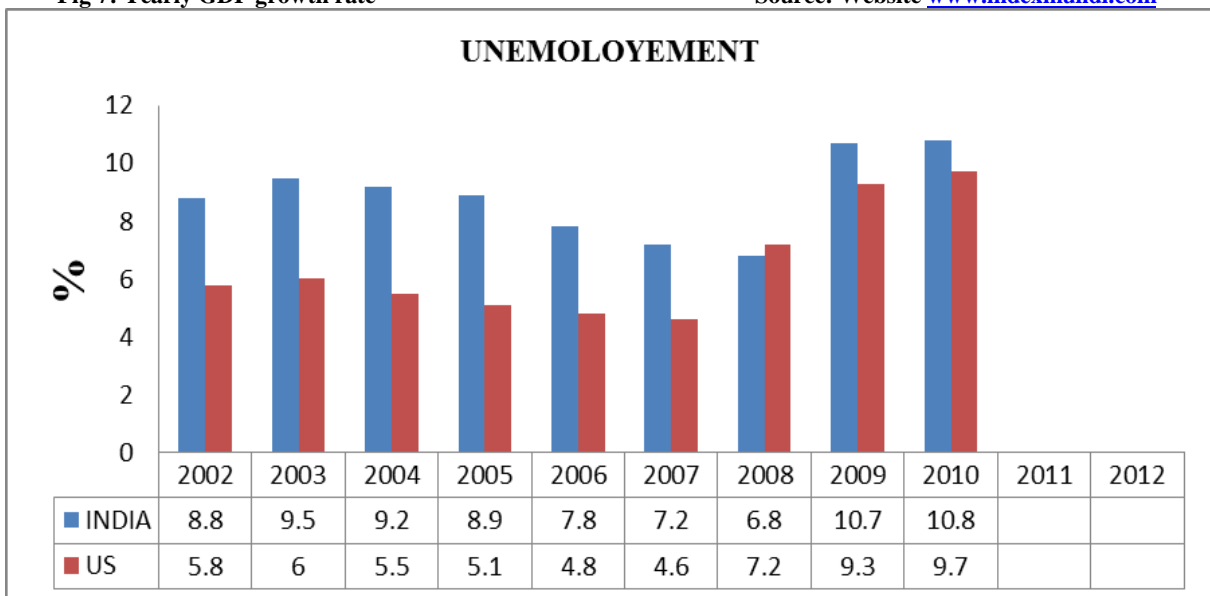


Fig 8: Comparisons on Unemployment India & US

Source: Website [www.indexmundi.com](http://www.indexmundi.com)

From above figures we can identify that the world economy is facing the big problem associated with unemployment .An organization like Cochin Port Trust capable to address this issue for our nation now showing its negative approach on this issue. It can be clearly identify from the following Fig 9 which shows the lost employment opportunity in percentage.

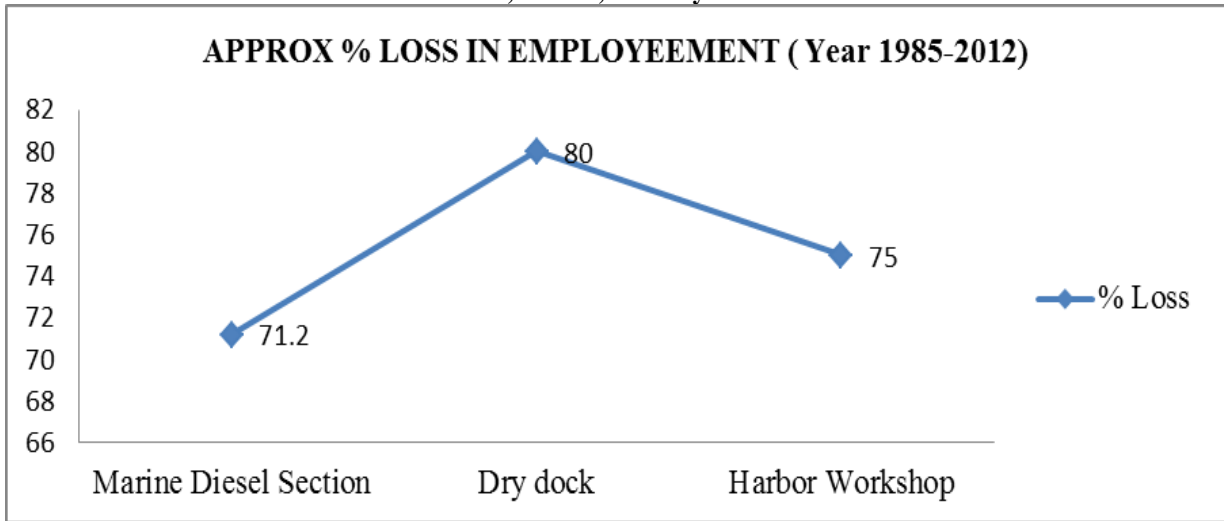


Fig 9: Lost Employment Opportunity in Cochin Port Trust

The study identifies the chance of loss in employment in future and shown in Fig 10. Concluding this discussion by identifying the following factor, which are affected the growth of the industry. They are absence of a technical governing body, and the absence of a quality circle followed by the Governing body with a vision towards the future of this organization. It leads to the inefficiency in the management contributed to poor utilization and identification of the strength of the available natural resources, and its importance in the changing business environment.

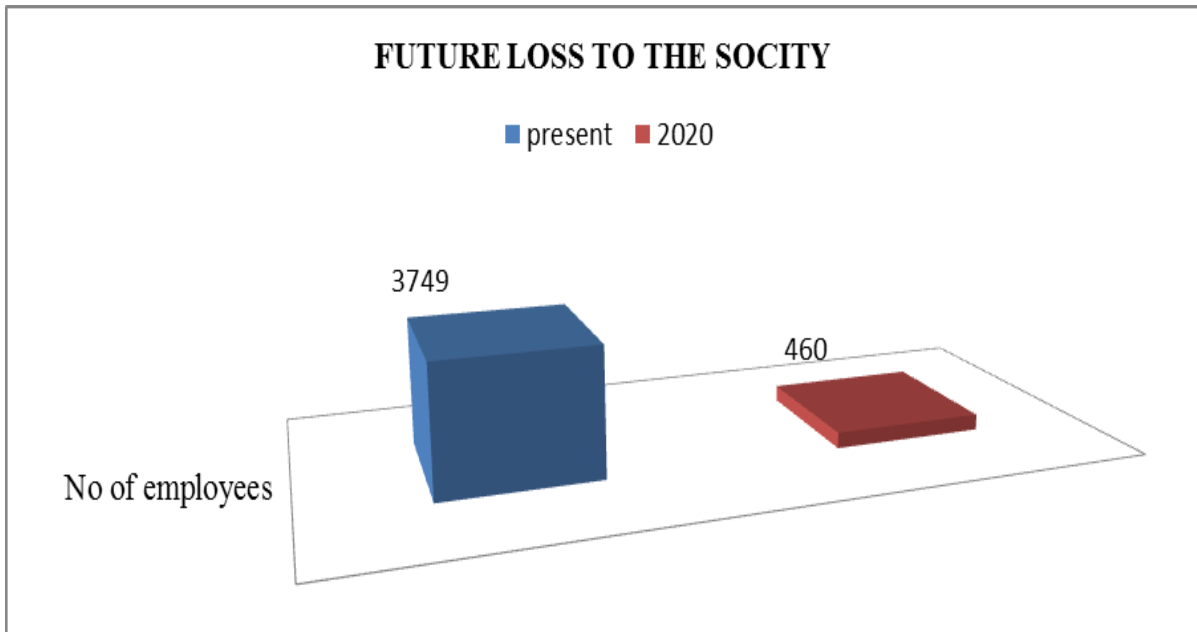


Fig 10: Future lost Opportunity

Source: Administrative Report 2011 and Board members of CPT

**C. Poor Utilization of Natural Recourses**

**Commercial Importance of Dry Dock and Workshop in the Changing Business environment**

The dry dock and workshop are constructed for the maintenance of vessels used by the Cochin Port alone. The present changes in business environment offer the Cochin Port Trust to generate revenue from harbor workshop and dry dock. Effective utilization this dock and workshop area will be a major source of income for Cochin Port Trust in future. Fig 11 shows the actual dock utilization in days [1]. It can be well marketed for the maintenance of private vessels which are operating through the port hinterland. Same time it will help to port trust to create employment opportunity for the educated youth of Kerala. The major advantage of Cochin Port Trust is the proximity to the Cochin Shipyard. It is possible to collaborate with Shipyard in several areas.



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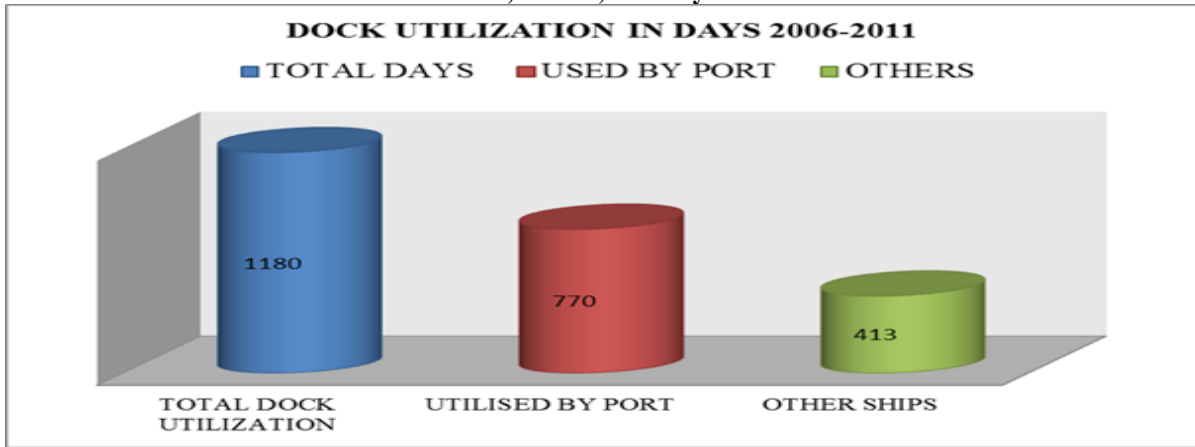


Fig 11: Dock Utilization of vessels 2006-11

The other main business opportunities are depends on following projects

- o Proposed Vizhinjam Transshipment Hub Project
- o Waving of Cabotage rule at ICTT at Vallarpadam

Anyway Central Government is planning waive the cabotage rule for ICTT Vallarpadam .It will allow the foreign ships to handle cargo in Cochin Port Trusts hinterland .The port can use the Dry dock and workshop for the maintenance of these vessels ,by taking the advantage of the e-port facility.

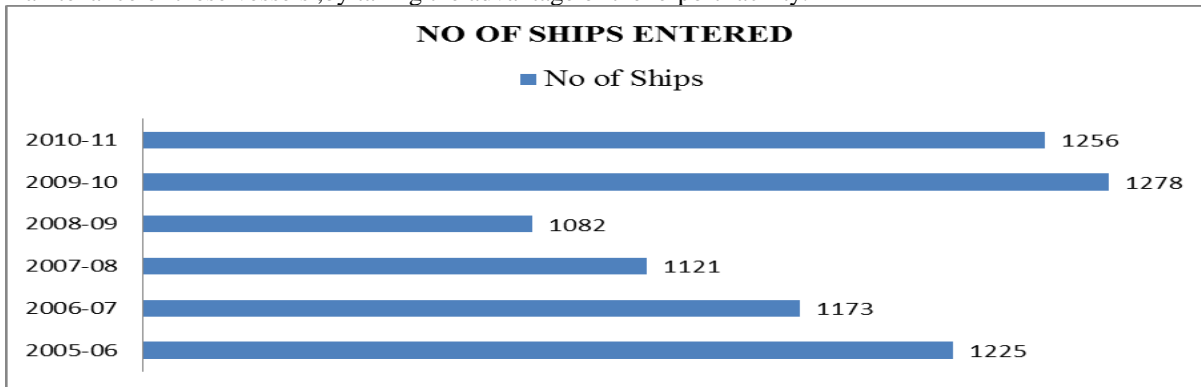


Fig 12: Statistics of No of Ship entered on Cochin Port Trust

Above Fig 12 shows the number of vessels entered in Cochin Port Trust for the last few years' [3] .The relaxation of Cabotage rule will defiantly increase the above statistics.

**D. Little Mechanization**

During the year 2010-11 the overall pre-berthing waiting time increased to 24.6 Hrs. as against 20.31 Hrs. in preceding year [1]. And average turnaround time of ships having cargo work increased to 2.20 days during the year from 2.08 days in preceding year. This is due to the insufficient number of material handling equipment in the port operation.

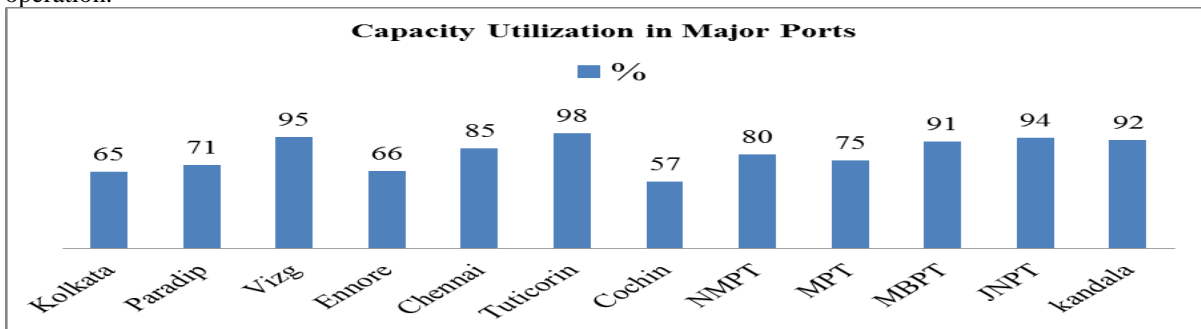


Fig 13: Capacity Utilized in Major Port Source: National Conference on Ports and Shipping 2011 Background paper





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From the above table the capacity utilization of CPT compared to other major port trust is very low because of the insufficient material handling equipment's. Concluding this discussion by identifying the absence of a quality circle. The absence affected the organization in its all area of operation. And it will be a loss to the society.

**E. Inefficiency in Management**

The Board of Trustees is an Autonomous body Appointed by the central government of India. The Board of trustees consists of eighteen members including the Chairman and Deputy Chairman appointed by Central government. The other sixteen members are also appointed by Central government. Out of this sixteen twelve member should be from the following area. Ministry of shipping, Indian Railway, DG shipping, Indian Navy, Coast guard, State Government, Department of Revenue, Labors employed in port, Major users and terminal operators, Ship owners / Agents, Exporters / Importers. The remaining four will be from other interest.

The main issue associated with this system is that even though the board is an autonomous body due to the appointment structure they are forced to follow the central government policies rather than the interest of port. Another important point to be considered is that none of the members are neither experts in port operation or port business. It will badly affect decision making in port management like opportunity identification, Technical advancement required etc. Concluding the discussion by the identifying the absence of a Technical Governing body and a Quality Circle.

**F. Poor Employee Engagement, Creation of bad working culture and idle machineries**

Data's are collected by conducting a survey among the workers using a pre-tested questionnaire with a sample size of 20. Sampling method used for the survey is judgment sampling method in non-probability sampling technique [5].

The effectiveness of the employee engagement depends upon the degree to which the employee is the part of the decision-making process and their ideas are incorporated in the final plan. It generates self-responsibility among the employees. This sense of self-responsibility instills the sense of ownership in the employee's mind and they will feel that they actually own the job and accountable for each and every decision. Employee engagement is not a one-time process or a short-term initiative; it is an on-going and steady process [4]. And it will be well managed in the presence of a quality circle.

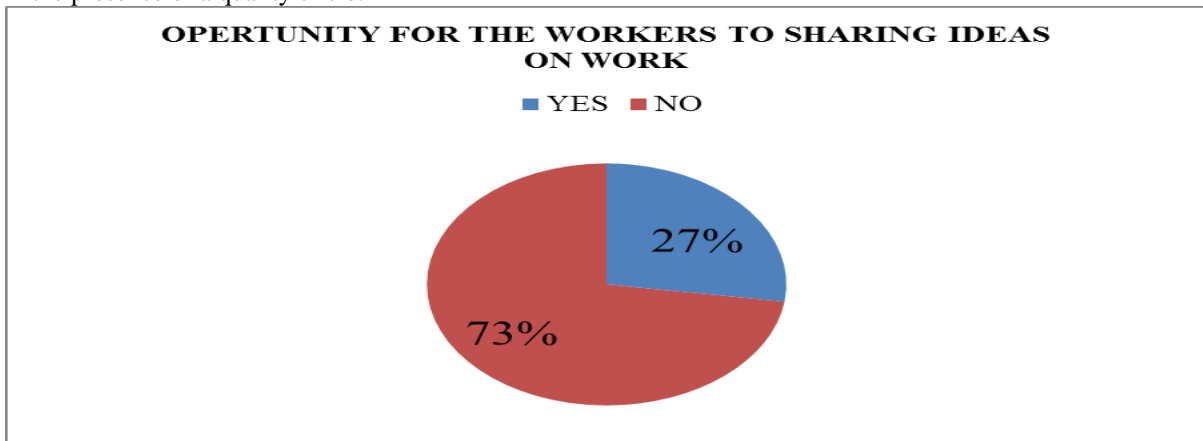


Fig 14: % opportunity for workers to share ideas

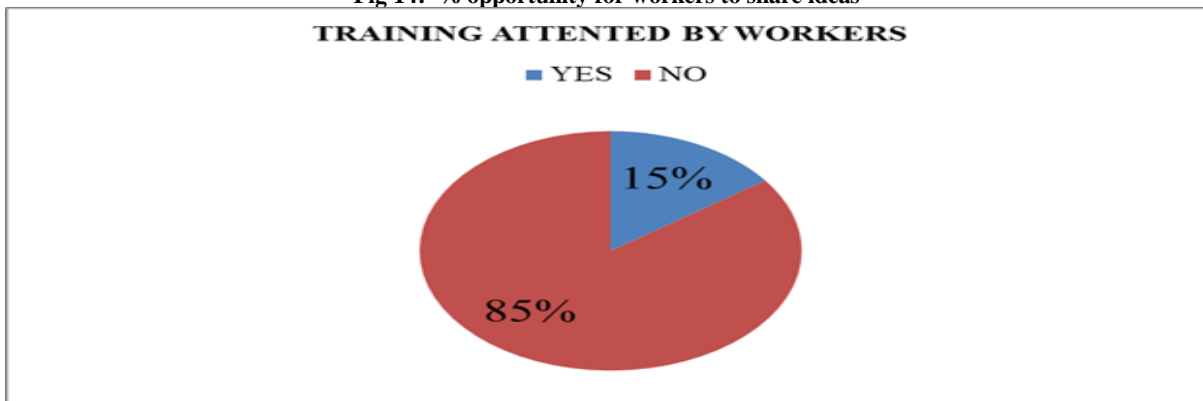


Fig 15: Training attended by workers



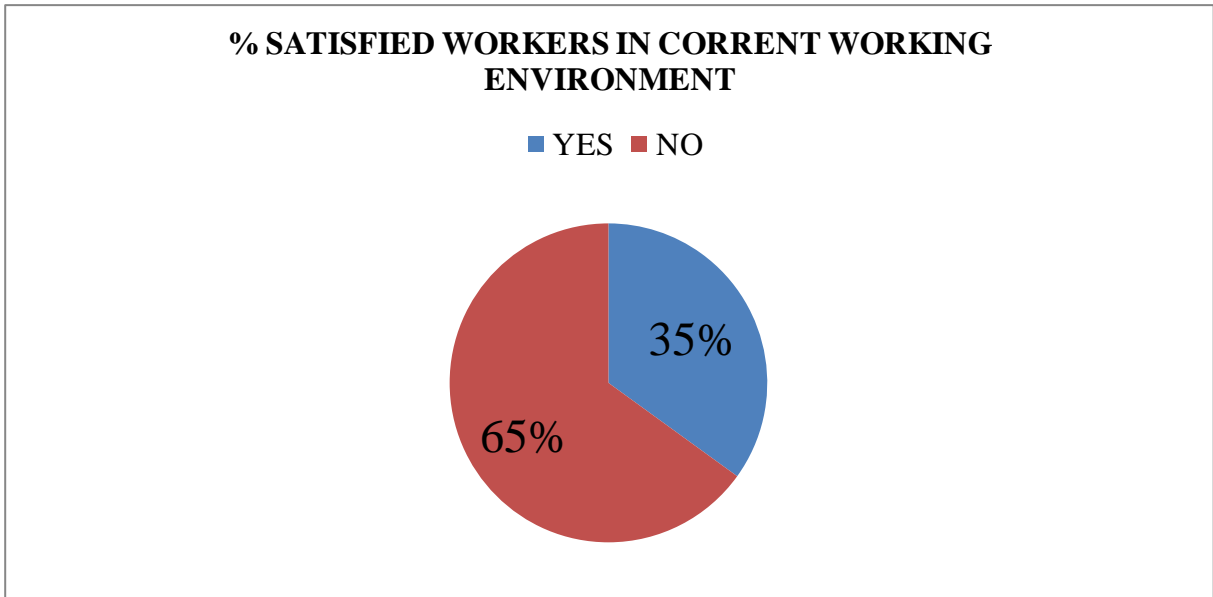


Fig 16: % Satisfied Employees

#### IV. REFINED CAUSE AND EFFECT DIAGRAM

A refined cause and effect diagram is created by considering the causes which has an impact on other causes or tackling these causes will eliminate other causes shown in Fig 17. The identified causes that the Central government policies and little mechanization are not addressing the this stage of the study .

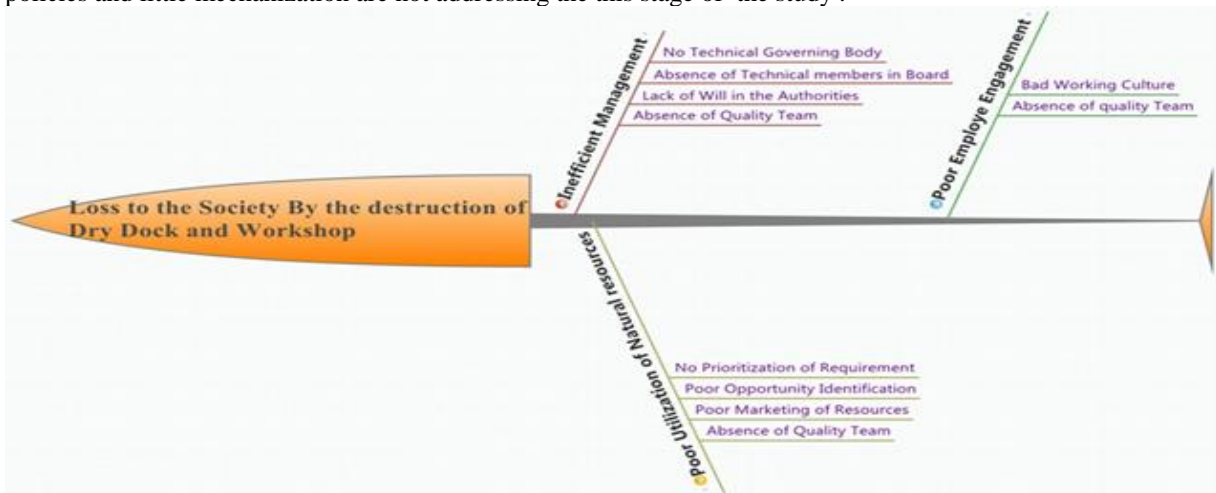


Fig 17: Refined Cause and Effect diagram

The major three causes Inefficiency in Management, Poor utilization of natural resources; Poor employee engagement should be tackled for the bright future of the organization. It can be done only by modifying the present organizational structure

#### V. SOLUTION AND DISCUSSION

This study identifies the absence of quality circle in all the areas of the port operation, which can be seen from the present organizational structure of the Cochin Port trust shown in the following Fig 18. The head of the department of the organization will not get sufficient time to ensure the quality and effective operation of the organization, also due to the reason that the Chairman and Deputy Chairman are nominated members by the Central government it also brings the issue that the nominated persons may not be experienced person in port operation and port business, most of the cases his core competency will be limited only in administration activities.



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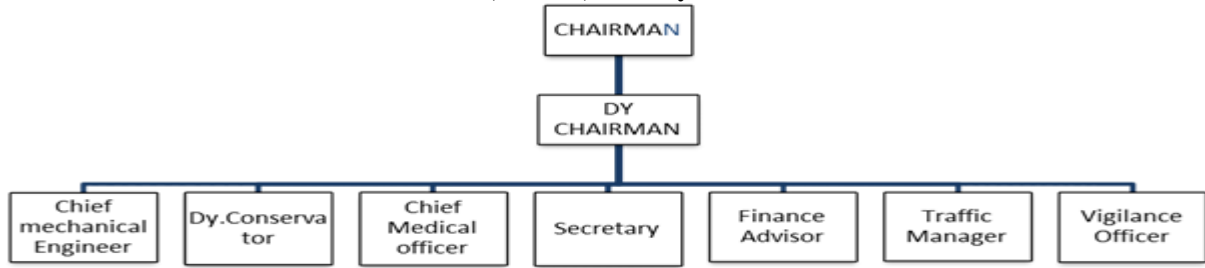


Fig 18: Present organizational structure of Cochin port Trust

The inefficiency in the structure of the organization created following problems

1. Cochin port Trust could not collect single money from the 11th five year plan by submitting a valid project report.
2. The management of Cochin port trust could not identify the crises in financial situation that they are going to face.
3. For any organization want to sustain in this type of business environment should possess a strong quality team inside the organization that was not present in the organization for the period of study .This created a pathetic financial situation that the port is facing now.
4. The Port Trust could not be able to create employment opportunity for the last 15 years. It is due to the poor utilization of natural resources by the management. It should be treated as the National waste.
5. No organization can be profitable with unsatisfied employees and bad working culture. The survey conducted among the skilled workers as the part of this study identifies this pathetic situation.
6. In the Changing business environment the organizations which need to survive in the industry should adopt any of the following strategies
  - Expansion of Business
  - Acquisition on new Companies
  - Merging with other Companies
  - Formation of Strategic Alliance

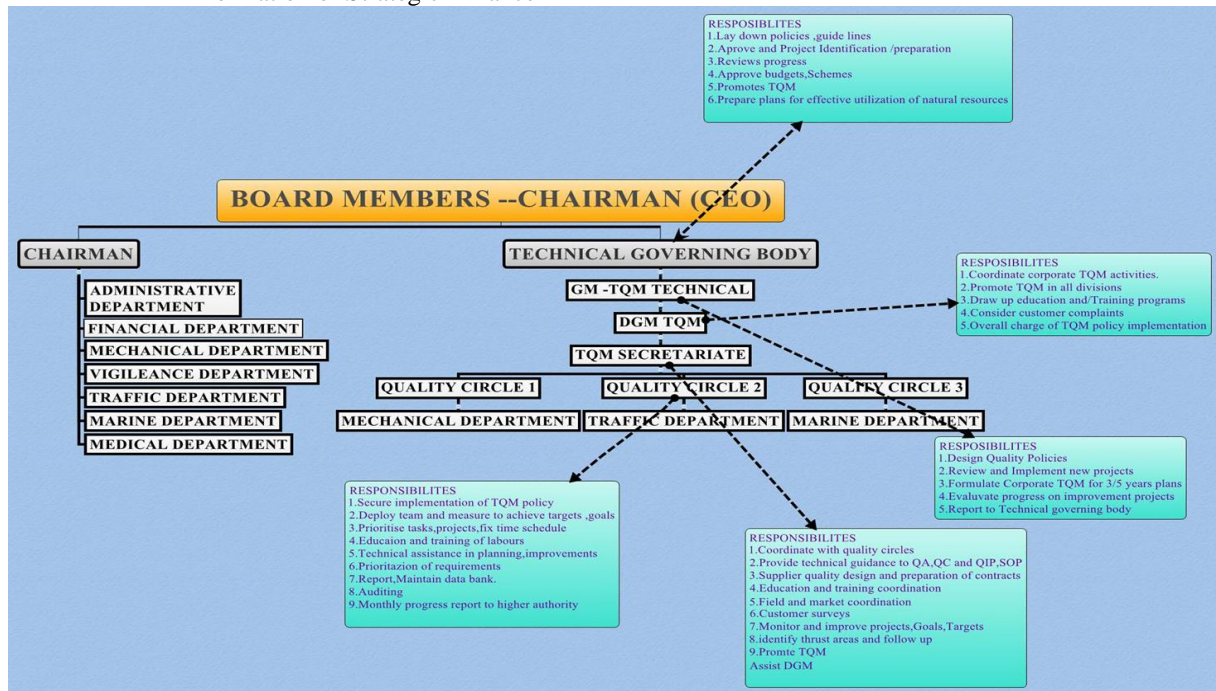


Fig 19: Proposed organizational structure of Cochin port Trust



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The opportunities Expansion of business and Formation of strategic alliance are two opportunities in front of the organization by taking the advantage following. Formation of strategic alliance with the Cochin Shipyard they are expert in ship building and ship maintenance located only 5 Km away from the port premises. The other opportunity in front of the Port trust is that Cabotage rule is relaxed for the ICTT Vallarpadam it provides a huge opportunity for the Cochin Port in the area of expansion of their business. The proposed Vihinjam Port also brings the same opportunity for the port trust. Cochin Port Trust can take the advantage of these opportunities only by creating a technical governing body followed by quality circle in all the department [4] as shown if Fig 19 .

## V. CONCLUSION

India's rise in recent years is a most prominent development in the world economy. India has re-emerged as one of the fastest growing economies in the world. India could unleash its full potentials, provided it improves the infrastructure facilities, which are at present not sufficient to meet the growing demand of the economy. Failing to improve the country's infrastructure will slow down India's growth process. Therefore, Indian government's first priority is rising to the challenge of maintaining and managing high growth through investment in infrastructure sector like Ports, Electricity, Roads and Bridges, Airports. It is generally estimated that the lack of infrastructure is one of the major constraints on India's ability to sustain a high rate of growth in India's GDP. The Eleventh Plan projections imply that only about 70 per cent of the infrastructure needs can be met from public resources or the remaining 30 per cent will have to come from private investment in infrastructure in various forms, including Public Private Partnership (PPP) [2]. The transport system in India comprises a number of distinct modes and services, notably railways, road transport, ports, inland water transport, coastal shipping, airports, and airlines. The recent accelerated growth in Indian economy and trade underscores the increasing criticality of the shipping sector for India, as the bulk of the countries Export-Import trade takes place through the maritime route. Almost 95% by volume and 70% by value of India's global merchandise trade is carried through the sea route [2]. The case studies on Cochin port trust suggest a change in organizational structure for making this organization capable to provide a support to the country for its future expectations regarding the economic growth. The study also reveals a situation that a detailed study should be conducted on our 12 major ports to enhance the capacity utilization. Improvement of human resources productivity through enhanced training and redeployment of surplus human resources is a major area to be addressed. Equally important, ports would need to pay greater attention to selection, deployment, and operation as well as maintenance of the cargo handling equipment.

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