Bharath
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)
(Vide Notification No. F.9-5/2000 - U.3, Ministry of Human Resource Development, Govt. of India, dated 4th July 2002)
Accredited by NAAC
NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL
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173, Agaram Road, Selaiyur, Tambaram,
Chennai - 600 073. Tamil Nadu.

Ref No.SMS-2018-O-30

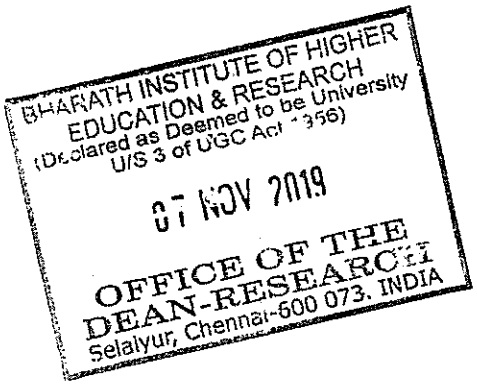
Date: 07/11/2019

TO

Mrs. A. Geetha,

Associate Professor/ Management Studies,

BIHER.



Thro: Concern Head of the Department

Greetings!!!

We are happy to announce that the Research Advisory Committee has approved your proposal for Seed Money Scheme-2018 which was presented by you. You are requested to complete the proposal and send the progress report to the Dean Research in the prescribed time period.

Title of the Project: A study on Production Planning and control with special focus on manufacturing sector in Kanchipuram District.

Seed Money Amount: Rs.1, 00,000/- (Rupees One Lakh Only)

Approved on: 04/11/2019

Payment details:

Voucher No.30 **Dated: 08/11/2019**

With Regards

Dean-Research

Bharath University

SELAIYUR, CHENNAI - 600 073, TAMIL NADU, INDIA.

CASH / PAYMENT VOUCHER

Date 08/11/2019

V.No.: 30

Debit _____ Amount

Rs. 1,00,000/-

PAID TO Dr. Geetha

RUPEES One lakh only/-

TOWARDS Seed Money scheme - 2018.

Authorised by **Finance Manager** **Cashier/Accountant** **Payee's Signature**

PROPOSAL SUBMISSION

1) Details of Principal Investigator

Name	:	Dr.A.Geetha
Designation	:	Associate Professor
Highest Qualification	:	Ph.D
Department	:	Management Studies
E-mail	:	geetha.bba@bharathuniv.ac.in
Contact no	:	8637419272
Date of Joining	:	7/3/2017

2) Details of Co - Principal Investigator

Name	:	A. Jhoncy
Designation	:	Assistant Professor
Highest Qualification	:	M.Phil
Department	:	Management Studies
E-mail	:	Jhoncy.bba@bharathuniv.ac.in
Contact no	:	9840712107
Date of Joining	:	15/7/2015

Technical Details

1. Introduction

Production planning and control is a tool available to the management to achieve the stated objectives. Thus, a production system is encompassed by the four factors. i.e., quantity, quality, cost and time. Production planning starts with the analysis of the given data, i.e., demand for products, delivery schedule etc., and on the basis of the information available, a scheme of utilisation of firms resources like machines, materials and men are worked out to obtain the target in the most economical way. Once the plan is prepared, then execution of plan is performed in line with the details given in the plan. Production control comes into action if there is any deviation between the actual and planned.

Production planning and material controlling can be defined as the process of planning the production in advance, setting the exact route of each item, fixing the starting and finishing dates for each item, to give production orders to shops and to follow up the progress of products according to orders. In any manufacturing enterprise production is the driving force to which most other functions react. This is particularly true with inventories; they exist because of the needs of production. In this chapter the relationship of production & material planning controlling to work-in-process inventories is stressed. The ultimate objective of production planning and Material controlling, like, is to contribute to the profits of the enterprise. As with inventory management and control, this is accomplished by keeping the customers satisfied through the meeting of delivery schedules. Specific objectives of production planning and control are to establish routes and schedules for work that will ensure the optimum utilization of materials, workers,and machines and to provide the means for ensuring the operation of the plant in accordance with these plans. The principle of production planning and Material controlling lies in the statement 'First Plan Your Work and then Work on Your Plan'. Main functions of production planning and control includes planning, routing, scheduling, dispatching and follow-u

2.Review of status of Research and Development in the subject

Gurjan, Vellapine, Hollock and Hollong are only a few of the many Indian timbers used for making good commercial plywoods. Such continuous depletion of the natural forest resources of the country due to various consumption of solid wood, it was felt to conserve the natural

resource forest by reconstituted wood products such as Plywood, Hardboard, Particleboard and Medium Density Fiberboard to meet the rising demand of Wood from the general consumer, Railways, Defence, Furniture, Laminate manufacturers and the builders. At the same time also it is trying to meet the wood demand by Bamboo products which are alike to wood.As per a report published by Department of Industrial Policy and PromotionPlywood, veneers of all types and other wood based products such as particleboard, medium density fibre have been delicensed, vide Department of IndustrialPolicy& Promotion's Press Note No.11 (1997Series) dated the 17th July,1997.It also mentions that as Plywood forms the major segment of the wood-based industry in the country, businessmen who wish to obtain approval from the Government for setting up any wood based project should obtain prior clearance from the Ministry of Environment & Forests before submitting the applications to the Administrative Ministry/SIA and enclose a copy of the 'in principle' approval given by the Ministry of Environment & Forests.

Also it states that as Per the Notification dated 22.1.2007 most of the wood items have been deserved, except wood furniture and fixtures. As per the current Export & Import Policy, the principal raw material, viz., wood logs are freely importable under OGL. The total production of Plywood during 2006-07 was54,45,857 Sq. Mtrs. and production during 2007- 08 (up to December) was43,38,998 Sq. Mtrs. The production of Particle Board during 2006-07 was44,76,704 Sq. Mtrs. and production during 2006- 07(up to December) was47,60,457 Sq. Mtrs. The export and import of plywood during 2006-07 wasRs.126.25 crore and Rs.57.62 crore respectively. The export and import of Particle Board during 2006-07 was Rs.18.86 crore and Rs.148.64 crorerespectively.According to the FAO (2015) India has around 70.7 million hectares of forested land, which constitutes to 23.8% of the total land area. Around 15.7 million hectares are primary forest, 43 million hectares of otherwise naturally regenerated forest, and around 12 million hectares are planted forest. India's annual change rate is positive and varies between 0.2 and 0.7% per year, indicating a constant expansion in forested area by about 1 million ha per year through afforestation projects. About 86% of the forest area is publicly owned, for the biggest part administered by the government, for the other part those public lands are reserved for communities and indigenous groups, the other 14% is privately owned. Public lands can be classified as protected, production or village forests.India is one of the twelve mega-biodiverse countries, hosting 7% of the world's biodiversity. Many flora or fauna species are endemic to India. Indian forest types include tropical evergreens, tropical deciduous, swamps, mangroves,

sub-tropical, montane, scrub, sub-alpine and alpine forests. The most widely distributed genera in tropical wet evergreen forests are *Dipterocarpus*, *Hopea, Callophyllum* and *Syzgium*,andthefamilies *Lauraceae* and *Myrthaceae* are also well represented. Tropical moist deciduous forests are characterized by *Tectonagrandis* (teak) and others by *Shorearobusta* (sal). (Forest legality Alliance)A major threat to forests of India is the slash-and-burn shifting cultivation to grow food, especially in its northeastern states. According to Forest Legality Alliance, 41% of forest in India is classed as "degraded," due to heavy use pressure on the forest from fuel wood collection and cattle grazing. The 275 million people living in forest areas, including 88 million "tribals," rely heavily on forests for fuel, fodder, grazing, wood, and non-timber forest products (NTFP's).

Production planning and control managementis considered as major concerns of every organization. In inventory holding, many steps are taken by managers that result a cost involved in this row. This cost may not be constant in nature during time horizon in which perishable stock is held. To investigate on such a case, **Taygi (2000)** proposes an optimization of inventory model where items deteriorate in stock conditions.

Esmaeili (2000) says, a proactive damage estimation method is used to estimate demands for the district based on worst-case scenario of earthquake in Tehran This paper deals with the application of six most potential preference ranking methods for selecting the best FMS for a given manufacturing organization.

Dou (2001) paper is committed to design a logistics industry development policy model based on system dynamic to simulate the policy measures which promote region economic and logistics efficiency. The interaction between logistic industry development policy and economy needs to be investigated and the influence degree of logistic efficiency affected by industry policy needs to be identified too.

Chatterjeea and Chakraborty (2001) say, it is observed that although the performances of these six methods are almost similar, ORESTE method slightly outperforms theothers. It is particularly applicable to those situations where the decision maker is unable to provide crisp evaluation data and attribute weight.

Leber (2002) reports the results of a survey on the use of innovation management techniques with the potential to improve effectiveness of new product development, and customer satisfaction. Failure mode and effects analysis was found as the most applied IMT in Slovene firms with the highest perceived utility potential to reduce development costs and improve customer satisfaction.

Antonelli and et al (2003) aims to identify Information Technology benefits in individual work. With technologies fully implemented, greater satisfaction was observed for all constructs of the survey, with statistically significant differences. When comparing age, it was found that younger users were more satisfied with the benefits of technology. Concerning the number of employees, small business users were less satisfied with Information Technology.

Nezhad (2003) employed the decision on belief (DOB) approach for fault detection in univariate process control. The concept of DOB and its application in decision making problems were introduced, and then methodology of modeling fault detection in statistical process control by DOB approach was discussed.

Alderete (2003) presents an econometric model to determine whether an SME (Small and Medium Sized Enterprise)'s probability of outsourcing depends on their levels of innovation and information and communication technology use. The model predicts that the level of innovation of an SME will significantly influence its probability of outsourcing. Besides, it stresses the negative incidence of the information and communication technologies (ICT) access on the outsourcing decision.

Pastore and Martin (2003) study was to examine students' perceptions of designing and developing mobile based instructions by interviewing and surveying of graduate students. Results of the survey and qualitative data analysis indicated that usability was a key issue on the mobile device. Users enjoyed quick access, good organization, user control, single column layouts, and large links/buttons. These findings contribute to the literature base on the design and development of mobile based instruction.

Norman E (2003) discusses, while existing factors identified in the literature were found to be present in the context of today's design program, the critical perspective of this study recontextualized these factors, along with the identification of new or underrepresented factors.

Agnelo and Fernandes(2003) aims to analyze, through a case study called Researching the Value of Project Management, the relations of the constructs of this conceptual model and to show how they interfere with the organizational values, possibly in programs conducted by a government agency, from the perspective of the senior management directly involved.

Didonet and Díaz, (2003) explains, the supply chain management studies have verified that integration and collaboration in the supply chain can provide important benefits to the companies involved. Among these benefits are added value, the creation of efficiencies and client, which are represented by the reduction in inventories, improvements in service delivery and quality and shorter product development cycles.

Zabala (2004) investigates whether decisions considered as common in new product development literature are also valid in a region characterized by traditional industries. The author aims to link the theoretical and empirical fields in the context of new product development and product innovation management.

Ulrich and Pearson (2004)introduce approaches for the integration of the Quality Function Deployment method as well as feedback with system components for computer aided product development. The integration is based on information models representing product, process and factory information.

Deshmukh (2005) provided the general framework of MRP-II system. Master Production Schedule (MPS) Drives the MRP system. It gives a listing of what end products are to be produced and when they are to be made available for shipment. This schedule must be based on accurate estimate of demand. Most of the research reports in MRP-II deal with case studies and conceptual framework.

(Deshmukh 2005).2.3.2 Bill of Material Bill of Materials (BOM) plays a major role in MRP processing as inputs for the product structure. It contains information on the relationships of components and assemblies, which are essential for the computation of gross and net requirements.

Gustav Tomek (2006) stressed that without the application ofcomputers in this field, we cannot speak about rational and systematic management. Computer techniques applied in this field

represent a qualitative increase in the level of management, especially from the following points of view. Enables information processing in a multi-optional way, i.e. information stored, summarized and grouped according to various criteria and views It produce ABC analysis for effective control of issues and procurement Highlights pending orders for which scheduled delivery dates have exceeded.

Helps detection of unusual consumption trends by consumption analysis Functions ofMRP System According to Chase and **Aquilano (2006),** MRP computer systems serve the organization by providing the functions below. Determine the number of parts, components, and materials needed to produce each end item. Determine the right part, right quantity, & right time to order parts. Provide time schedules for ordering materials & parts. 18 • Maintain a bill of materials sequencing the assembly parts of the final product (product tree structure) Theme ofMRP .

(Chase and Aquilano 2006)"Getting the right materials to the right place at the right time." Many firms claimed as much as 40 percent reductions in inventory investment due to implementation of MRP systems (Chase and Aquilano). Although there are over 300 MRP-II software systems in the market.. To the great surprise of many, manufacturing resource planning (MRP-II) is still the dominant application software for today's manufacturing management .

(Turbide 2007). According to Norman Gaither and Greg Frazier, A successful MRP system requires accurate stock records, accurate Bills of Materials and effective Capacity Planning to ensure that plans are achievable. MRP and CRP together provide the basis for an integrated system covering all aspects of business control, from sales order processing to shop floor scheduling and purchasing. The effective implementation of MRP combined with CRP can dramatically improve customer service, simultaneously reducing stock levels and improving manufacturing productivity.

MRP System Information Architecture The William **J. Stevenson (2007)** has developed the information architecture for MRP system. The Material Requirements planning (MRP) system requires information about Master Production Schedule (MPS), Bill of Materials and inventory records. The MPS is a detailed production schedule for finished goods or end items that provides the major input to the material requirements planning process.

Sarah (2008) survey, Currently 70 percent to 80 percent of discrete manufacturing companies use MRP-II packages, whereas in the continuous and batchprocess industries, the installed base ofMRP-II is only 15 percent. Andy kovari reviewed the MRP-II Software package. In general, MRP-II software consists of a single integrated system that handles materials inventory, production scheduling and control, and financial record keeping. It provides major advantages over the traditional method of inventory control because, instead of simply looking at past consumption of an item, it estimates future materials requirements based upon both firm and expected orders.

Martin slofstr (2008) designed decision support system to speed up MRP- II activities. Computer-Assisted Resource Planning (CARP), consists of two parts — a database manager and a hardware engine. The CARP system takes an extracted set of data from the host MRP-II database and downloads it into a file. Once the data has been downloaded, the CARP system explodes the MRP/Capacity Requirement Plans 20 in seconds, enabling production planners to immediately analyse the material and labor impact resulting from changes to the production plan.

June Attman (2009) studied the cost factor associated with MRP-II system. While many manufacturers struggle with costly mainframe, so minicomputer manufacturing resource planning (MRP-II) software designed to improve their profitability. A number of manufacturers said they have found a better way as compared with mainframe based systems.

Lawrence Gould (2009) given the benefits of MRP-II software package. MRP-H software is designed to accumulate and organize manufacturing information so executives can enhance their decision-making capabilities for resource-planning applications. Manufacturers can use MRP-II software to increase sales, cut inventory, enhance customer relations, and reduce labor expenses. More and more MRP-II packages are incorporating fourth-generation languages to simplify software development, modification, and maintenance. 2.4.1 Evolutions ofMRP-II Software Package.

George Plossel (2010) and Green reviewed the evolution of MRP-II software packages from 1960 to 2000. Material requirements planning (MRP), is the part of manufacturing resource planning, developed in the system for planning the availability and procurement ofmaterials. MRP mission was to calculate the need for material against available inventory and then to chart

material requirements along a time line. Using MRP, material planners could "time phase" their purchase orders to help meet production schedules. In the early 1970s, MRP planning and control capabilities were expanded to include machine and labor capacity and production scheduling.

(George Plossel 2010). Bums reviewed the key feature of the MRP-II software package. Many companies have considered using manufacturing resource planning (MRP-II) systems to solve their manufacturing problems and to keep up with increasing competition. MRP-II offers the manufacturer the ability to control and monitor costs, track inventory and produce an improved product at a lower cost. Due to the increasing competitive nature ofmanufacturing in Nearly every MRP-II expert will acknowledge that a successful MRP-II implementation requires a total commitment on the part of the manufacturing company. As a result, education and consulting support 22 are considered key features of any good MRP package (Fawcett et al 2001). The MRP-H software market is expected to evolve considerably over the next five years as more manufacturers implement MRP-II. The ability to integrate other manufacturing technologies such as just-in-time, total quality control, statistical process control, engineering design, management decision-making, process characteristics, etc., is becoming more important.

(Ormsby et al 2010) Hardware compatibility will become an issue, as manufacturers demand the ability to migrate to smaller platforms or to interface to other systems already in house.examined the issues associated with the acquisition and implementation of Manufacturing Resource Planning (MRP-II) systems in Chinese manufacturing companies. In recent years a number of computerized manufacturing systems,

(Yao 2010) Software vendors such as SSA, QAD, Oracle, Symix, and SAP are the major providers of MRP-II systems (Holland et al). 23 According to Oliver Wight, MRP-II implementing characteristics can be grouped into four classes. Users in the Class A category are able to effectively use the planning and control process of the MRP-II system from top to bottom ofthe company and generate significant improvements in customer service, productivity, inventory, and costs. Class B category users have a dependable closed-loop material requirement planning system and stable manufacturing control, but they do not use MRP-H as a mechanism to master the overall operation of the company.

Wang et al (2010). In the process of implementing MRP- II, World manufacturers have found that subassembly, numerically controlled system, and repetitive production are the three environments that are favorable for implementing the MRP module ofthe MRP-13 system Pan. Two major problems have been encountered in the process of implementing MRP-13 system. They are (1) the disconnect between the MRP-II system and business management and (2) inadequate strategic planning and preparation for implementing a new computerized system.

Nick Chambers (2011) have compared MRP-II system with Advanced Planning System (APS). The new APS systems are not intended to replace MRP-H completely but to add value and improve system performance. In every other sizeable manufacturing or processing organization, the planning and simulation capabilities of MRP-II are rarely adequate. To overcome this problem, an increasing number of companies are turning to the advanced planning system (APS) as an adjunct to their MRP-n systems. The essence of APS is its speed of operation. Using sales and inventory data from an MRP-n system, it can produce a production plan in seconds or a few minutes. APS can be used for both materials and capacity requirements planning, and master production scheduling, functions which are common to all MRP- 24 II systems.

(Chase &Aquilano 2012), the information provided by MRP-II systems allows firms to realize the following benefits. Reduce sales price Reduce inventory Better customer service Better response to market demands Ability to change the master schedule Reduce setup and tear-down costs Reduced idle time .

(Michael 2012). For instance, many companies develop web-based systems to offer customer support services over the Internet. Web-based applications over the Internet result in new challenges, such as interoperability, security, data integrity and seamless access to multiple data sources.

(Chengen Wang 2013). The accelerating change is shaping all aspects of today's manufacturing industries. Over 25 the last decades, manufacturing shifted from traditional mass production towards customer responsive production. Information processing is an important challenge in an internet-based manufacturing environment, and must facilitate distribution, heterogeneity, autonomy and cooperation.

(Micheal 2014) In the field of manufacturing, a number of concepts such as the " agile manufacturing enterprise", " virtual enterprise", " extended enterprise", and socalled next generation manufacturing enterprise have emerged. Virtual enterprise is considered as the most advanced and efficient form of modem networked enterprise organisation, and is supported by extensive use of information and communication technologies.

(Yao 2015) This is essentially Internet - based manufacturing and its main characteristics are the exploitation of distributed information, integration of process, and remote manufacturing. The Internet, incorporating multimedia and distributed information processing technology, has provided tremendous potential for remote integration and cooperation in global manufacturing applications because it has become the worldwide information platform for the sharing of all kinds of information. At the height of dot com fever, the letter e preceded nearly everything. It can be e-business, e-commerce, e-tailing, e-fulfillment, and e-finance. Virtual enterprise can easily gain and integrate more resources through internal integration and cooperation with other enterprises to provide quick response to customer expectations within rapidly changing business environment.

(Chengen Wang 2016) An internet-based service is greatly shaping manufacturing industries. Web developments offer sophisticated communication and information transfer services supporting market exploration, ecommerce and collaborative manufacturing among geographically dispersed organisations. 26 2.7.4 e-Manufacturing Collaborative manufacturing or e-manufacturing creates a window onto the shop floor. The e-manufacturer is integrated with the rest of the in supply chain. In traditional Manufacturing orders enter one end and finished goods exit the other, but the activities on the shop floor are not visible in real time to trading partners.

(Patricia 2017) With e-manufacturing, shop floor activities are now visible to trading partners. Sharing accurate real-time data is at the heart of e -manufacturing, and e-manufacturing is the essence of business-to-business e-commerce. The Internet presents both threats and opportunities for manufacturers in today's economy shows different types ofparticipants in e-manufacturing environment. Virtual company Figure 2.3. Different types of participants in e-manufacturing environment

2.1 international Status: NIL

2.2 National Status: NIL

3. Progress/achievement so far

a) Reference papers collected.

b) Literature survey studied.

c) Proposal work has been started in Production Planning and Control

4. Work Plan:

4.1 Methodology:

The main objectives of the Production Planning and Control is as follows,

(a) To know how the production planning contributes to the efficient use of facilities and equipments.

(b) To know the effects of Production Planning and Control on Production function.

(c) To know whether production planning and control practices lead to waste reduction and increased profit.

(d) To prove that short term production planning and scheduling techniques employed by industries.

PRODUCTION AND EXPORT

According to ITTO (2017) the industry of India produced in 2015 almost 50 million m^3 of logs, of which only a minor portion was exported. In this year the export value of primary timber products exceeded 72.6 million US dollars.

	Production quantity (x 1000 m^3)	Imports quantity (x 1000 m^3)	Domestic consumption (x 1000 m^3)	Exports quantity (x 1000 m^3)
Logs (Ind. Roundwood)	49 517	5 783	55 289	11
Sawnwood	6 889	732	7 593	28
Veneer	295	378	666	8
Plywood	2 521	114	2 574	61

ITTO (2017), data 2015

India has a thriving range of industries for semi-processed and value-added timber products, including wooden handicrafts, pulp and paper, plywood and veneer and wooden furniture. Exports of wooden handicrafts in particular are on the rise.

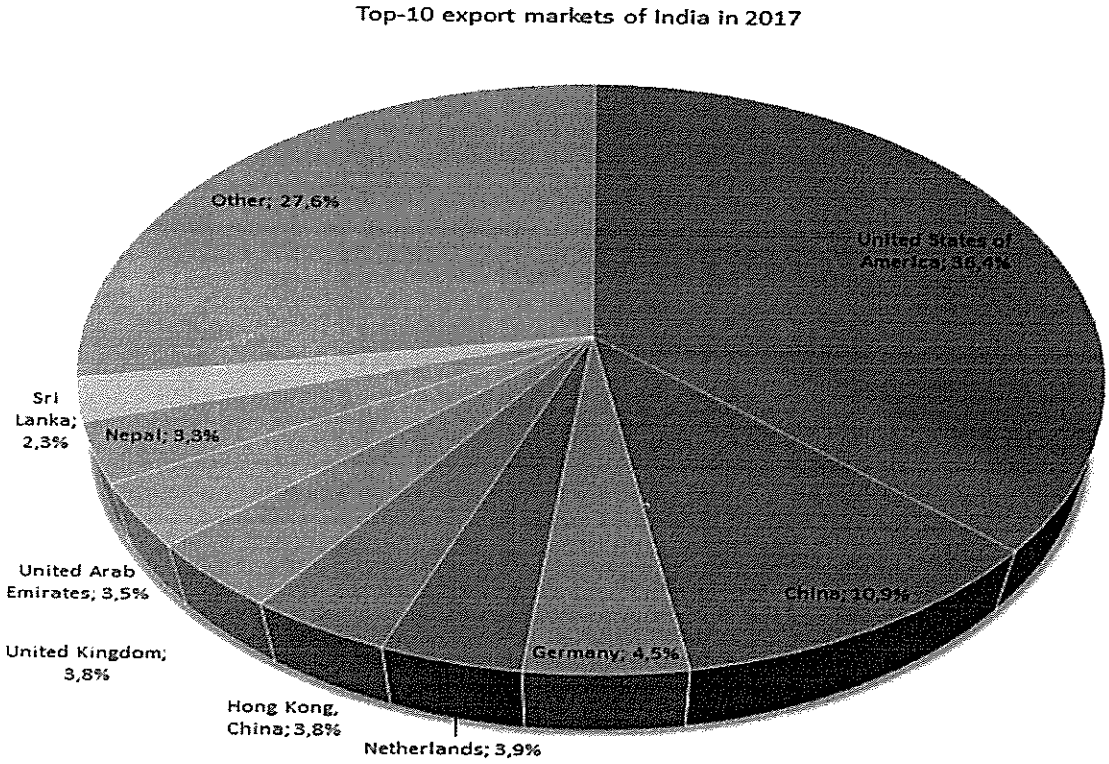
Commonly harvested species from natural forests in India include, among others:

- Teak (*Tectonagrandis*), both from natural and planted forests.
- Sal (*Shorearobusta*)
- Acacia catechu
- Pyinkado (*Xyliaxylocarpa*)

Common planted species include, among others, fast-growing (and short rotation) species of:

- Teak (*Tectonagrandis*) is the most widely planted timber species in India, and most of the teak is harvested from planted forests.
- Eucalyptus (*Eucalyptus* spp.)
- Acacia (*Acacia* spp.)

Although India is one of the world's top producers of tropical logs, it is also one of the world's largest consumers of wood products. India cannot meet its own demand for wood products with domestic supply, and as a result is currently the world's 2nd largest importer of tropical logs. India is a major producer of wood-based products, including pulp, paper, plywood, furniture, wooden handicrafts, and veneers. Its major exporting hubs are the EU, US and the Middle East (Forest legality Alliance).



Source: *ITC (2018) Main markets, in terms of export value, for the product '44 Wood and articles of wood, wood charcoal' exported by India in 2017*

4.2 Time Schedule of activities giving milestones through BAR diagram. Work plan (including detailed methodology and time schedule)

S.no	Activity/ Milestone	1" Year	2" Year
1	Literature review	1-5	
2	Data Collection	6-12	
3	Analysis		1-6
4	Solutions		6-12

4.3 Expected outcome within the time period of Production Planning and Control

1. Effective utilisation of firms' resources can be identified.

2. Can be achieved the production objectives with respect to quality, quantity, cost and timeliness of delivery.

3. Obtain the uninterrupted production flow in order to meet customers varied demand with respect to quality and committed delivery schedule.

4. After completion it can be help the company to supply good quality products to the customer on the continuous basis at competitive rates.

5. Suggested Plan of action stating the name of funding agency where the project will be communicated for financial support within the time period of project.

NIL

6. Bibliography:

1. Harris, gattour, s, 2003 The National advertising practices of multinational companies; a content analysis study. European journal of marketing volume 37, no ½; 154-168

2. MacKenzie, I.2004 English for business studies - A curse for business studies and economics students. Cambridge, United Kingdom;

3. Nardi, P.2003. Doing Survey Research– A Guide to Quantitative Method.

Websites:

1. www.wikipedia.org

2. www.tmtl.com

3. www.eichertractors.in

7. List of Projects submitted/implemented by the investigators (Separate for Pi and Co-Pl)

Nil

7.'l Details of Projects submitted to various funding agencies:

Nil

7.2 Details of Projects under implementation

Nil

7.3 Details of Projects completed during the last 5 years

Nil

8. List of publications published by the investigators, if any:

Recent Publications(Journals)- Chronological order	
Sl.No	**Details**
1	Role of Leadership in Facilitating Organizational Change through innovation & Technology in IT Sector (print only) DOGO RANGSANG Research Journal, Sept 2020 UGC Group 1 Journal ISSN: 2347-7180, Vol 10 Issue:9 No.1.
2	The Study on Role of Guidance & Progress in a Management Development, Alochana Chakra Journal, May/2020, ISSN NO:2231-3990, Volume IX, Issue V, Page No:1862 - Page No:1870.
3	Acquisition and retention of Talented women employees, Recent innovations in Management, science and humanities, March 2020 (Multidisciplinary UGC Care Listed journal) - ISSN: 2394-3114(Vol-40-issue 45-march-2020).
4	National Conference On Innovative Management Practices Towards Business Excellence, Organized By Koshys Institute Of Management Studies, Bangalore, 16th November 2019 (Proceedings).
5	Components of Capital Structure in Manufacturing Industry, Shanlax International, November 2018.
6	International Research Journal of business and management (IRJBM) – ISSN 2322-083X- VolX,issue 12, November 2017 (pg 104 – 112)

7	A Study on Distribution Channels in Cement Industry South Asian Journal of Marketing and Management Research2013, 3(2),106-115
8	Role of Motivation for improving Organizational development , Zenith International Journal of Multi disciplinary Research 2013, 3(10),64-71
9	National conference on New trends and Dimensions in Indian Business – Faculty of Arts and Science/ BIHER
10	HRM and Supply Chain Management ,Nehru Journal of Management2010 (Print only)

b). List of publications published by the Co- investigator, if any:

Sl.No	Details
1	International Conference on Innovative Trends in Business and Management entitled "A Study On Problems Faced By Patients In Government Hospitals".
2	2020(one week),ICT Tools for Teaching, Learning Process and Institutes(AICTE,UGC,NBA), Sri Sankara Arts and Science college, Kanchipuram

9. Project Budget

A. Salaries & Wages	: I Year	II Year
Total	10,000	10,000

1. Principal Investigator/Researcher: 1
2. Supporting technical staff or other personnel, if any: 1

Grand total: 20,000

B. Expendables for field visit:

a. Travel: 20,000

b. Other project costs, if any (please specify) this head may include items such as Sample survey/Data Collection etc. 30,000

c. Contingencies 10,000

C. Dissemination of Research Work 20,000

Grand Total (A+B+C): 1,00,000

(Justification for amounts proposed under each head must be furnished with a view to justifies its need and relevance to the project).

10. Name of at least two subject experts from the Institute and one from the outside Institute with their contact details:

a) Dr. D. Venkatramaraju,Professor,Department of Commerce and Economics,BIHER,Chennai-126.

b) Dr.S.A.Krishnan. - Professor, Department of Management Studies, SRMIST, Kaatangulathur.

CERTIFICATE FROM THE INVESTIGATOR

Project Title: A study on Production Planning and control with special focus on manufacturing sector in Kanchipuram District.

It is certified that

1. I do hereby agree to submit a complete proposal for financial support to the external funding agency within the time period of SMS-2020

2. I undertake that spare time on equipment procured in the project will be made available to other users.

3. I agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. I also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, GOI would be followed in to.

4. I agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trails/experiments/exchange of specimens, human & animal materials etc.

5. I agree to abide by the terms and conditions of SMS-2020, BIHER, and Chennai.

Name and signature of
Principal Investigator

Name and signature of
Co-Principal Investigator

Date: 05.10.2019
Place: Chennai

Forwarded by Head of the Department

Signature of the Head

PROJECT EVALUATION FORMAT

Recommendation Sheet

Name of the Principal Investigator	Dr.A.Geetha
Name of the Co-Investigator	Ms.A.Jhoncy
Name of the Department	Management Studies
Title of project	A Study on Production Planning and Control in Manufacturing Industry
Recommendation of the evaluation committee	Recommended
Financial allocation recommended	Rs. 1,00,000

Sl.No	Equipment	Quantity	Amount in INR
1	Salaries and Wages	2 (2years)	20 000
2	Travel support for the purpose of research work.	-	20,000
3	Contingency	-	10,000
4	Others Project Cost	-	30,000
5	Dissemination of Research Work		20,000
	Total		1,00,000

Name and Signature of the Research Advisory Committee members with date

(Dr. P. Naveenchandran)

Internal Quality Ass. Cell * IQAC * Selaiyur * BIHER