Chapter 6

Recommendations & Summary Gains, Limitations, Scope for further works

6.1 Recommendation

On the basis of the data analysis and imperial experimental study interpretation accounted in the previous chapters as well as the findings and the conclusions drawn by the researcher, the following recommendations are made by the researcher for Bosch Ltd Nasik.

1. Supply Chain Management is playing an important role in cost saving and revenue improvement. Therefore, Import substitution concept should be adopted by each and every industry to save the cost, improve the revenue not only in Nasik district but all over the Country. As this thesis shown the initiative taken for supply chain management as tool for import substitution in Bosch Nasik and taken it sportingly and allowed to use this supply chain management tool as import substitution and very well demonstrated not only point of view of supply chain management but also experimental setup provided in Bosch as well as at supplier end.

2. As effective supply chain management and Industrial profitability are positively interrelated; therefore, each and every industry should use SCM system
in efficient and effective manner for positive effect on productivity. In above thesis demonstrates not only one tool of supply chain management i.e. Import substitution but also there are other tools like Value stream mapping, Value stream design and Business case concept with respect Value stream KPR (Key performance results), KPI (Key performance indicators) and its correlation with value stream mapping and value stream design. How to find out the waste generation from the running department and what can be the project definition in order to reduce waste.

This waste will not only improve the productivity of that value stream (means department of organization) but also help to organization profit also in productivity. In above demonstrated chapters these tools are very well explained and demonstrated with application. All tools running in Bosch Nasik. These tools were recommended not only for Bosch but also for other running industry those who want take the benefit of such tools. This tool shows how top management expectation drilled down to working team of the organization, if it perfectly drilled down you will get the expected results, which has very well demonstrated in the above thesis. With help of this recommendation not only Bosch but also other multinational and local multinational can take the advantage in terms of productivity and cost competitiveness improvement, supply chain optimization by analyzing the material moment and cycle time reeducation project and 5S projects.

3. As effective Import substitution and Industrial profitability are positively interrelated; therefore, each and every industry should use Import substitution concept in efficient and effective manner for positive effect on profitability. In above recommendation it is all about the other supply chain management tools but in this recommendation mainly for import substitution tool of supply chain management, this effectiveness is very well demonstrated in this thesis by using
the supply chain management tool as import substitution. In above validation and experimental set up we got the intensity of all efforts to validate the Import substituted assembly of test cable with some imported and some import substituted Components, these efforts also pay off for the cost reduction of cost per piece of injector in Bosch. These efforts finally help the profitability of organsational and from above efforts taken by Bosch helped it for the same.

To sum up this recommendation, Import substitution tool is helpful after the using of recommended tool suggested in recommendation 2. Because in above thesis also it is very well demonstrated that Import substitution tool used after using the tools such as Value stream mapping, Value stream design, Business case, Key performance indicators, Key performance results and finding way of waste generation in the value stream mapping. So combination of using both tools will yield such innovative idea project which finally helps organsational in their meeting strategic goals.

4. According to our study, in engineering industries reverse engineering tool can be used for import substitution successfully, which is significant part of our import. So to reduce import burden on a country reverse engineering and import substitution can go hand in hand. During this experimental study Bosch Nasik realized and accepted the fact for same of doing the reverse engineering. Though the terms reverse engineering nice to listen but to perform is equally difficult. This difficulty urging out from the thesis during the assembly of child components of both imported one as well as the import substituted child component of test cables.

In above thesis shown in order to start with reverse engineering in terms as a package was very important. Because it has been started to know the first child components specification though final application of test cable was know, but reverse engineering started with knowing the each child component specification.
This is same approach is required for reverse engineering and same has adopted as first step in Bosch Nasik. Second step after understanding the first step is the application of finalization of specification of child component with respect to its availability locally. In some child component it has found that import substitution is not feasible in India because by doing so it required first lot of efforts and this efforts will not pay off because of complexity and final quantity required for Bosch in immediate two years of test cable, so decision made the keeping some child component of test cable imported and some child component selected for import submitted. This is second and import step to finalized requirement of child component specification and working team in Bosch sense it early and demonstrated as successful output mixture of both Child components i.e. imported and import substituted one. Last step was the assembly of test cable here team demonstrated patient and it is required during the assembly process and very well accepted because there some process need to be understood in detail and accordingly find solution for assembly. Bosch accepted and demonstrated on all three aspect of reverse engineering. Might be this is very specific to this test cable assembly but still can be valid for other components in Bosch or other any industries.

5. As Indian vendor successfully producing the test cable for common rail injector with lower cost and same quality of the Deutschland manufacturer. This benefit can be taken by other Bosch plant of common rail injectors for reducing the cost of procuring the test cable for their injectors. With this India should get the benefit from importer to exporter status. This thesis is perfect example for above recommendation to demonstrate. By using this project from the organsational point of Bosch not only shown the confidence in working team of the Bosch but also the confidence got generated at supplier end. Because to show confidence in research, is the first step of success for any project. In Indian circumstances people associated with supplier end so motivate to prove their capabilities.

In order to capture this capabilities company and multinational like Bosch should utilized the potential available with local know how supplier. This has
been also very well demonstrated though this thesis. Using the potentials by using
the proper tool of supplier or vendor selection for particular potential of supplier
is equally important. This will not only help as organisms but also help the
other supplier or vendor giving them confidence for proving critical task. Same
has been performed during these projects and explained in above thesis. First step
selecting correct vendor or supplier and working with them as unit and giving
them confidence as business partner and get done what was required not only for
product but also for the product quality. This is approach is very well accepted by
Bosch Nasik and equally demonstrated through this thesis for vendor
development in India. This can be sued by other multinational companies.

6. This experiment helps us to show the way how technological up gradation of
vendor or supplier in manifolds, take place with focused approach. In present
experiment study technological up gradation taken place by doing the reverse
engineering. In the reverse engineering of test cable not only the supplier team
was involved but also the Bosch working team experience was also utilized to
work out the strategic goals of the organisation in difficult circumstance. While
working with Bosch working team has also explore to new learning from supplier
and supplier team also explore to Bosch learning and systematic approach of
problem solving.

Most of the supply chain tools are very well accepted by supplier ( Business partner ) and implemented at supplier end but also technically become
more stronger in test cable reverse engineering there were some process like
crimping, soldering and assembly of test cable were critical. Supplier as well as
Bosch work to gather to solve the issue of soldering and crimping process reverse
engineering for assembling it with golden plated and silver plated terminals and
complete assembly as a cable. This learning is special purpose this has not given
confidence to supplier in this process also technically more upgraded while
working on upgradation such process. This learning coming out for both Bosch as
well as its Business Partner ( Vendor/ Supplier ) will help them for long time not
only for business point of view but also to accept next challenge in same field
process of other project. Important is Bosch Nasik sense this urge and in Bosch Nasik mission statement this is not only getting reflects but also demonstrated through their acts.

7. This experiments will help to guide the people on the thinking of “Local to Local and Local to Global” is possible. This will help lot to developing country like India and most of the entrepreneur. Above saying also proves by the thesis. In above thesis is so much deliberate about the above saying but gives most of indirect massage from the experimental setup as well as by using the supply chain management as tool of import substitution of test cable used for the common rail injector. As discussed in above chapters how this saying proves discussed in following paragraph.

As common rail injector is getting manufactured in almost 9 countries of the world and each one has the source in Deutschland for buying the test cables. This too much dependency for one supplier is having certain advantage and disadvantages. Now one supplier (Business partner) is getting developed in India. Now this will serve to Bosch Nasik. This proves the statement for Local for Local and same supplier can also helpful for the countries those are located in Asian regions of Bosch for manufacturing the common rail injector. This proves second saying that Local to Global. This very well accepted Bosch as over all such example can be demonstrates by other multinational by sing such simple tool of supply chain management i.e. import substitution.

8. As this experiment though the output of Supply chain tools but successful completion will give department leaders and working team lot of motivation and help to increase their efficiency towards problem solving. This project demonstrated in thesis was outcome of the supply chain tools but the identified project was the innovative projects. For proving innovative project with same amount workload of the department is really achievement for both working team member as well as leader of the department, because putting efforts for systematic
time line, PDCA, approach, tracking open point list and reviewing with leader the status of project required lot of time and investment of this time with in parallel with running project in department is really appreciable for an department. This approach will helpful to increase & improve the efficiency of the department. Achieving more task with limited resources.

9. At present some issues or drawbacks are presents in industries which affects adversely on their profitability; therefore, each and every industry should try to overcome these drawbacks for effective implementation of Import substitution practices.

6.2 Summary gains

i. Introduction

The logic behind the study is targeted on the role of Bosch Ltd through the policy and management programmer of provide Supply Chain Management for the event of Nasik district Industrial Productivity. It’s connected with provider, Producer. It supports to state, nation and foreign countries. Its impact on the business atmosphere of the state trade and economy ought to be understood. Asian nation has been commercialism with foreign countries from history. The product of our country were celebrated everywhere on the planet.

The role of provider and distributor in trade may be a strategic issue for any country within the world. Supply Chain Management is taken into account because the supply chain management helps in value mapping and identifying waste from the process. Also it has flexibility to remove the waste and derive to value stream design as per requirement of organizational goals of reducing cost
per piece of product. Asian nation may be a strategic country within the Asian continent in respect of low-cost provide and huge market potential. The economy has become stronger. The country has recorded continuous growth of six to eight % of GDP in value for the last twenty years and is probably going to be ten GDP in close to future.

This experiment part of supply chain management precisely import substitution helps Bosch Nasik to increase the efficiency of the people, to increase the technology of the vendor, to increase the saving of organization in terms of money and time, identifying the waste from process and removing of it from the process. This experiments not only talks about the organizational benefits but also the technological up gradation of vendor by doing the import substitution. This study and experiment also encourage other organization for import substitution in order to reduce the cost per piece of product.

The researcher is happy to put on record the findings drawn from the various experiment conducted by the researcher at the supplier and Bosch Ltd Nasik and the analysis done out of experiment study with respect to cost saving. The brief outcome and which is in term of brief gains can be note down in following way.

The researcher had selected one critical consumable item called test cable of common rail injector for doing import substation. Consumable item can be import substituted with excellent effective SCM tool. This provokes to use reverse engineering concept in order to do import substitution. This not only reflects in term of cost per piece of test cable but also in the cost per piece of product. This study reflects the existing practices running in Bosch and study of existing system.

Test cable of common rail injector was getting procured from Deutschland and while same part if we procure from Country of Origin (India) the Labor Cost will be less and Import Duties will get eliminated. Thus making same test cable of common rail injector is cheaper. Import substitution also helps to optimize the supply chain by reduction in Procurement time, This study and experiment
demonstrated that with dedicated and focus approach of department target such target of import substitution of test cable of common rail injector is possible.

By doing import substitution of test cable Bosch India saves 5500 Indian rupee per test cable. This finally results into saving of 3.5 Million Indian rupee per year. This saving is finally saving of tool cost. Reduction in tooling cost will also reflect in cost per piece of manufacturing of the product. Yearly saving in terms of million Indian rupees and its effect in terms of cost per piece saving is from this import substitution quite appreciable for comparative business world. Lesser the tooling cost less will be the total manufacturing cost.

Test cable import substitution is one of the initiatives of common rail injector assembly department of Bosch Ltd, Which came as the output of the value stream mapping and value stream designing of department. This study and experiment has demonstrated such initiative from department should come out in order to contribute to organisational in order to fulfill the stretchable target. This will not only reduce the cost of individual tooling but also the cost per piece of product. Although the cost per piece of product will not reduce in the drastically but it will help to meet organisational goals.

Import substitution of test cable from developed country like Deutschland to Developing country like India is really challenging. This will definitely save the currency going to other country. Import substitution of test cable save valuable foreign exchange also it has earn foreign exchange, as vendor has supplied test cables to Bosch Ltd not only to Bosch India but also Various Bosch plant outside India. By doing import substitution is having the intangible benefits, This intangible benefits not only help to particular origination but also to most time its serve to that nation, as most of the technical knowhow which comes first time to country and the vendor encounter with new technology with his existing man power has up graded to the new technology by doing this experiment. With the success of this project now supplier supplying to Bosch Plants which is also providing injector to outside India. This increase in production led to procurement of new machines also at supplier end.
6.2.2 Summary of gains through study

<table>
<thead>
<tr>
<th>Summary of Gain through study</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Intangible (Indirect) gains</strong></td>
<td></td>
</tr>
<tr>
<td>1. Departmental orientation for SCM tools &amp; Reverse Engineering</td>
<td></td>
</tr>
<tr>
<td>2. Cross functional team approach</td>
<td></td>
</tr>
<tr>
<td>3. Departmental efficiency</td>
<td></td>
</tr>
<tr>
<td>4. Department working toward Plant Vision statement</td>
<td></td>
</tr>
<tr>
<td>5. Technological up gradation of local supplier</td>
<td></td>
</tr>
<tr>
<td><strong>B. Tangible (Direct) gains</strong></td>
<td></td>
</tr>
<tr>
<td>1. Reduction in cost of consumable</td>
<td></td>
</tr>
<tr>
<td>2. Cost per piece saving</td>
<td></td>
</tr>
<tr>
<td>3. Reduction in lead time of procurement &amp; foreign exchange</td>
<td></td>
</tr>
<tr>
<td>4. Supply chain optimization for indirect material procurement</td>
<td></td>
</tr>
<tr>
<td>5. Life of test cable is improved with certain modification</td>
<td></td>
</tr>
<tr>
<td>6. Quick response from supplier for ordering &amp; flexible scheduling</td>
<td></td>
</tr>
</tbody>
</table>

Table (6.1): Summary of gains through study @ Bosch

Above table shows the summary of gains through this study of Supply chain management as tool of import substitution in order to reduce the cost per piece of the product. There are lot of gains through this study but it has divided into two types 1\textsuperscript{st} is Intangible gains and 2\textsuperscript{nd} is Intangible gains from the experimental study. In following is the discussion for the same on study and experiment gains for the import substation of test cable for common rail injector for Bosch Ltd Nasik. We will go though the first Intangible and then tangible gains.

A1. Departmental orientation toward SCM tools and Reverse engineering.

By doing the import substitution of test cable which is used for common rail injector in Bosch Ltd Nasik, this study and experiment setup help to
understand the with available resources and manpower to prepare test cable similar to imported test cable was challenge, with the experiment it has now feasible to do import substitution of imported test cable with help of reverse engineering. Department also got orientation of supply chain management tools. Import substitution of the test cable of common rail injector is initiative of department which came from value stream mapping, Value stream design, Business case and its KPI, KPR monitoring of department. This all are the supply chain management tools.

A2. Cross functional team approach

Import substitution of test cable of common rail injector in India is one of the major milestone for industry like Bosch. By doing the import substitution of test cable Bosch India save 5500 Indian rupee per test cable. This gain is in term of gains is still high but during this project the cross functional team approach was equally important to get certify all the validation and the finally implementation of test cable which is import substituted first time by any Bosch plant. Important is the coordination within team and learning this skill through project was very important because in this case supplier (Business partner), Leas plant, and internal Bosch Nasik team was involved and. With all this cross functional team get project though within 1.5 to 2 years was great learning. Team has understand and learned through this cross functional approach, I as researcher and team leader for cross functional team also learned importance of cross functional team through this study.

A3. Department efficiency

Import substitution of the test cable of common rail injector is initiative of department which came from value stream mapping and KPI of department by using supply chain management tools. The experience of experiment resulted into increase of the moral of team member and for the organization it was an effort of maximum utilization of manpower, Hence this study also demonstrated that
challenging project can also be successfully implemented with available resources by department.

A4. Department working toward plant mission statement

Bosch Nasik plant has the vision of “We along with our Business partner are cost competitive through lean and effective process”. This study is perfect example of above vision statement of Bosch, Nasik. As researcher first I understood the organisational goals importance and working toward the achieving all milestone related to it, and same I as researcher convey to team.

A5. Technological up gradation of local supplier

To own entrepreneurship is very much import in this comparative world. Developing country like India, where this is very much in need that good entrepreneur should come out to Lead India. For them always any technical up gradation is challenging one. This study and experiment of import substitution as a tool of supply chain management demonstrate same. As vendor encounter with new technology with his existing man power has up graded to the new technology by doing this experiment. With the success of this project now supplier supplying to Bosch Plants which is also providing injector to outside India. This increase in production led to procurement of new machines also at supplier end. Hence hypothesis is proved.

B1& B2. Reduction in consumable cost and cost per piece cost

As this project got define through mapping the business case from top to bottom on the top it was reducing the cost per piece and second step was mapped which was in control of manufacturing team is the reducing the consumable cot. Test cable was the highest contributor in cost per piece. By doing this study the cost per piece now reduce drastically which is almost 65 % compare to Figures of 2013 for cost per piece of the test cable. It has reduced from 4.5 Rs to 2 Rs of cost per piece. This also impacted over all consumable cost. This has reduced it by 3.5 MINR.
B3. Import substitutions will save foreign exchange and lead time of procurement

Most of the country speaks about Local for Local market and many organisations also following also practices same. India being developing country, import substitution of test cable saves valuable foreign exchange also it has earned foreign exchange. This money surely saves for foreign exchange for organisation origination but also for nation also. This will help same way to reduce the lead time of procurement because to buy material from one country to another adds the customs of two countries. To put the manpower and for getting the clear the material from customs add money and all taxes which are just waste of money. By this study it has helped not only reduce the lead time of procurement but also the money involved in clearing the consignment from customs.

B4. Supply chain optimization for indirect material procurement

This study also helped to optimize the indirect material procurement because same material procuring from Deutschland and same from India having lot optimization and same time also reduce the risk in procurement. More on same topic explain in B3.

B5. Life of test cable is improved

As test cable used in all other 9 plants of the Bosch in other countries. So supplier at Deutschland had standardized cable. Where Bosch, Nasik expected modification was not implemented to increase the life of test cable by supplier of test cable @ Deutschland. Now because of the local source of test cable all expected modification required to increase the life of test cable has implemented, so life of test cable has improve lot is almost more than 1 month compare to imported one. This shows it very important to have local supplier in order to run it with customized way.
6.3 Limitation of study

This is experimental study conducted in Bosch Nasik. This study took place at the supplier end and Bosch Nasik premises. This study having certain limitation not only with application point of view but also there are certain data which cannot be openly share because of the Bosch policy. These Limitations are as follows

1. The scope of this analysis is restricted to the provision chain management in Bosch Ltd. The study was created by the mean of science for the amount of 2012-2013. Therefore, the scope of this study is restricted to the present amount and provides chain management within the Bosch Ltd solely. This analysis is restricted solely to Bosch Ltd. so results and conclusions are connected and appropriate for Bosch Ltd only, they will or might not be applicable to different areas of Bharat or the other a part of the globe. If there's some variation within the knowledge, then the results and conclusions might not be constant.

2. During attempting this project in Bosch i.e. A study of Supply chain management as tool of import substitution in order to reduce the cost per piece of product, we have not consider the GSCM. GSCM stands for the Green supply chain management. In this GSCM, application of provide chain management and adding the “Green” element thereto therefore on stress upon the necessity of atmosphere friendly system. Increasing price of inexperienced provide chain management is principally driven thanks to the deterioration of atmosphere.

In above thesis the timeline was so critical and stringent for the proving the project. This thesis starts with all supply chain management tools and finally using the tool called import substitution after this, there are lot of steps of the validation not only Bosch, Nasik but also at the Supplier end (Business partner). This Validation is not so easy to conduct, because we need to book the production
lines, Audit test bench and most important need to book the master on which validation going to happened for test cables. The last part is taking the lead plant (i.e. Deutschland) approval by using the engineering change note for source change of the test cable for common rail injector manufacturing injector testing. As this activities cause lot of the stringent timeline. So focused on the activities becomes 2nd priorities. However Bosch, Nasik support and motivate the fact to produce Eco friendly products and want to save environment. This limitation considers in order seeing this possibility in the next research possibility to add the GSCM. But during this thesis this is not consider.

3. This experiment setup took place at the Bosch as well as supplier end. Most of the validation was discussed in the above thesis and results were consolidated in the proper format. Still the in the thesis we have not use the supplier or vendor name (Business partner) in the thesis. This is again the policy were in this thesis vendor details are not given.

4. Test cable manufacturing agency is now in two locations one is in Deutschland and another in India, disclosing the name of vendor in India not allowed same way disclosing the vendor name of Deutschland is not allowed. Same also valid for the child component supplier. During the thesis there lot of time discussion of child components parts and its criticality, so detail of their child components not has been discussed.

5. This Study is based on supply chain management tool i.e. Import substitution in order to reduce the cost per piece of the product. In this study product is nothing but the common rail injector. The Cost per piece for injector is not the share in the above thesis nowhere. However the base of complete experimental revise as well as the deliver succession administration studies is to understand
how industries can make used of this tool with the help of systematic approach. This has been demonstrated through complete experimental study and systematic approach of department and the supply chain other tools which got linked afterward with tool called import substitution. Though the cost per piece of injector is not share in this thesis, but it should not take away the credit for the approach for complete experimental setup which demonstrated in this study.

6.4 Scope for further research

As per the study done during the import substitution of test cable still there is scope of further research on this topic. Further scope for this study majorly divided into following two heads.

1. Import substitution of all child components.

2. Horizontal deployment of import substitution all other indirect tooling of common rail injector assembly.

3. Further reduction in cost by suggesting certain alternative in child component.

4. Green supply chain management (GSCM).

Import substitution of all child components.

Test cable consists of almost 20 child components, This study include almost complete reverse engineering not only the assembly process as well as the child components of its. This study as well as experiment covers import
substitution of 15 child components out of 20 child components, and it was also
difficult earlier stage. With dedicated as well as with the focus approach for doing
so it could possible. Still there are two major components they are namely golden
plated plug and silver plated plug, which is critical to resistance as well as the
injection quantity of injector, so in this study we have not touch this two
components. We have keep the supplier for this components same as like for
imported cable. These two components is high cost item, after doing the import
substitution we could reduce cost by 31 % per piece of cable. Technically its
seems to be possible to import substitution of this plugs. Indian suppliers (within
circle of Pune- Mumbai- Nasik) have potential to accept this technological up
gradation challenges. Only challenges for doing so, it need detail study of golden
platting as well as silver plating process on metals. Which later on add 20 %
reduction more on cost per piece of test cable.

Further reduction in cost of test cable in cost by suggesting certain alternative
in child component In first point main focus was to do the import substitution of
the of all child components. As mention in earlier paragraph for that though there
are 20 child components of test cable but the main child components we have not
focus for import substitution, because time line was critical for this research.
Majorly golden plated and silver plated terminal are still contributing the 50 %
cost of import substituted cost of the test cable. This is true that there should be
possibility to do the import substitution of these child components.

After doing the import substitution of both yield expected still cannot be
grantee because of its design complexity of golden plated terminal. In this future
scope of study we can select the silver plated terminal having cost of half of the
silver plated and need to coating at terminal end. Still this can reduce the cost.
This will not only reduce the cost but also the originality of the requirement of
golden plated requirement. Because contact part should be golden plated. We all
know gold is more conductive material than silver and same time having less resistance than silver plated. This may carry risk but still the coating at terminal end can finalize by repeating the same validation which explained in result and discussion. This validation still worth to repeat with this modification, because the outcome after this trial will be good enough to pay off.

Horizontal deployment of import substitution all other indirect tooling of common rail injector assembly.

As Common rail injector assembly in Bosch Nasik started in 2008, which almost 7 years ago. Bosch Nasik work lot for doing import substitution for both for indirect and direct material required for common rail injector assembly. As our topic is related to indirect material, we will focus on indirect material required for common rail injector assembly. Bosch Producing common rail injector in almost 9 countries and Bosch Nasik India one of the Bosch Nasik started producing Common rail injector late. As this was relocation project from Deutschland, so most of indirect material required are also from Deutschland. For particular for functional test cable vendor for all 9 Bosch Plant is same. But due to import substitution of test cable done by Bosch Nasik, Bosch Nasik has not only explored new Supplier for Bosch Nasik but also for other Bosch Asian plant. But we don’t want to stop here as mention earlier this was relocation project many more potential are still there which can explore in same systematic approach. I am sure with dedication approach Bosch Nasik can also reduce cost per piece of injector within regulating to live in elevated spirited market.

1. Green supply chain management (GSCM).
GSCM integrates environmental thinking into offer chain management (SCM). For the aim of this report, this includes introducing technical and innovative processes into materials sourcing and choice, delivery of the ultimate product to shoppers, and end-of-life product management. The meant result's to enhance a business’ environmental impact whereas increasing potency and growth among its own offer chain. Inexperienced offer chain management includes the employment of a reverse supply system for the recovery of used materials and product. Recovery networks link a “disposer market” of used product offered for repair, remanufacturing, or exercise with a “reuse market” that reflects the demand for these product. If these 2 markets coincide, the network is remarked as “closed-loop”; if the markets diverge, the network is remarked as “open loop”. Once product are recovered by an aftermarket, forward and reverse supply networks are typically tangled Recent analysis involving OEM remanufacturing has examined the strategic and economic problems attached the choice of whether or not or to not even establish a recovery network. The way to manage the recovery network once two-faced with competition from freelance remanufacturers normally, notice that coordinated style of the forward and reverse supply networks is sensible once there’s an oversized geographical separation between the disposer and recycle markets, important variations in their value structures, and high come back volumes.

More broadly speaking, reverse supply models generally graft the reverse supply system onto an existing forward logistics supply chain assuming that the pre-existing supply chain structure is basically unaltered. In this study we examine how the original forward logistics system is affected and changed due to the addition of a reverse logistics system. In the established supply chain management after using its tool of import substitution for test cable of common rain injector, more need to focus same way which as has explained in above paragraph. This has to starts from supplier end and the process then packaging of it and its material receipt at Bosch Nasik. This process we mapped and see the
potential not to make it leaner but also greener. This is still potential where researcher is suggesting the scope of improvement.