



# AN EMPIRICAL STUDY OF ADVANCED TECHNOLOGIES IN MODERN FOOTWEAR INDUSTRIES IN INDIA

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## ABSTRACT

Footwear quarter is a completely massive section of Leather and Non Leather merchandise in India. The length of Indian Domestic Footwear Industry is predicted to be really worth 1919 million pairs wherein leather and non-leather-based Footwear per capita consumption is anticipated to be approx. 1.61 pairs The foremost factor of shoes region is a layout, product improvement, clicking, final, aspect, lasting & completing. Advanced technologies within the region of shoe layout structures, automation, cost savings and productiveness enhancements as well as enabling new tendencies in footwear area in India. Although these days shoes is produced the usage of many similar techniques to those hired all those years in the past, obvious technological improvements in equipment, raw materials, production and trying out techniques have modified what was to all intents and functions a cottage enterprise right into a multibillion dollar sector. At the identical time, latest years have visible a wonderful shift in manufacturing facility vicinity faraway from the conventional industrial heartlands of Europe and North America to the new lands of possibility, in general in Asia. The motive of this paper is to study the areas where superior technologies can drastically have an effect on the way of shoes quarter is practiced. Strategies for implementation of the vital modifications in exercise are also mentioned.

**Keywords:** *Advance Technology; Productivity Improvement; Opportunity; Quality Control.*

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## 1. INTRODUCTION

The design and manufacturing of comfortable, long-lasting and well-made shoes had been the intention of shoemakers round the arena for thousands of years. As with so many other industries which have played a essential function in civilization, little changed in the way shoes and boots have been made till the approaching of the economic revolution in the direction of the cease of the 19th century. Although these days shoes is produced using many comparable methods to the ones employed all those years ago, obvious technological improvements in machinery, uncooked substances, production and trying out techniques have changed what become to all intents and functions a cottage enterprise into a multibillion dollar quarter. At the equal time, latest years have seen a wonderful shift in manufacturing unit place away from the traditional business heartlands of Europe and North America to the new lands of opportunity, on the whole in Asia Over the past ninety years, there have been predominant adjustments



in shoemaking, a few small and others substantially affecting the enterprise. The maximum improvement of the areas lasts, alternatives to leather, machinery, footwear testing and the place of manufacturing vegetation.

## 1.1. Footwear Making Process

- **Designing:** Designing of the shoe is most number one and essential method of shoes manufacturing. It begins with sketching that exhibit the creativity of the clothier. The sketch is in addition transformed into three dimensional shoes, thinking about all dimensions of the foot. The designers also specify the materials required for making the footwear.
- **Clicking or Cutting:** Clicking is the present day name of reducing. In this department, materials are reduce in diverse designs. Materials specially leather is reduce manually or by machine. Material saving, great & productiveness are the maximum issues of the branch. The operation needs high stage of ability because the pricey substances such as leathers are reduce right here. Leathers may have various defects at the surface which needs to be adjusted inside the shoe components. 70% of the price of the shoe are due the value of those reduce substances.
- **Closing:** Here the reduce issue portions are assembled and stitched together, as in keeping with the samples, with a purpose to produce the three dimensional finished top. Wide percent of manpower is needed within the manner of upper making.
- **Lasting:** In this method, top is in addition formed within the shape of shoe. There are various creation process in lasting to make the shoe like stuckon, stobel, string lasting and so on.
- **Finishing:** Finishing is the method to enhance the apperance of the shoe. Special waxes, lotions, crayons, solvents and many others Are used.
- **Packing:** The shoe elevate is inserted within the shoes to maintain the form of the finished footwear After this operation, the finished footwear are stored in the bins.

## 2. LITERATURE REVIEW

According to Padmini Swaminath (1996) in her paper "Development Experiences: Gender Prospective on Industrial Growth, Employment, and Education" explains how the economic improvement in India lacks the co-ordination between the govt./ industry and the labour. The paper tries to assess the great of state interventions and their impact on industry and labour. The author emphasizes the want for transforming the state interventions into strategic gender Needs Mr. Refeeq Ahmed (1986) in his paper "development Perspectives of Indian Footwear Industry, The case of Indian shoes" highlights the significance of the Indian leather-based shoes industry's potentiality for exports. He brings out the need for popularizing emblem name, strengthening education facilities particularly to ladies, and close linkages among industry, education, and instructional institutions. The paper also emphasized the need to have the carrier of professionals from evolved nations to train the neighborhood artisans specifically traces.

Parmeshware S. (1990) has made the have a look at at the effect of development groups on cobblers of Athani town from a socio-political factor of view.



### 3. OBJECTIVE

- To evaluate the role of enhance generation
- To recognize the gain of advance era.

### 4. RESEARCH METHODOLOGY

Data are normally gathered via social technological know-how include censuses, government departments, organizational statistics desk studies of online sources, studies papers, conference files, and other guides. Data from SATRA, Council from leather export has been used. Annual Report on MSMEs, Annual document of the ministry of commerce and enterprise, numerous annual reviews of State Financial Corporation, and diverse economic establishments have been used. The statistics had been compiled from kinds of resources:

- Published documents and reviews
- The World Wide Web

#### 4.1.Changing Styles Through the Decades

**The 1910s** The First World War of 1914-1918 saw thousands and thousands of men going to fight around the world. With women filling the jobs left vacant by the men's absence, a choice for more realistic girls's footwear to be used in the factories turned into born. However, as shortages commenced to chunk, the concept of being wasteful became seriously criticized. With a loss of fabrics, dresses have become shorter and the identical layout of lace-up boot that have been worn at the turn of the century changed into now viewed as practical rather than 'old school'. A few shoes designers did try and create greater thrilling styles with, for instance, leathers mixed with colored canvas or gabardine, to create -tone 'spectators'. Suede have become famous, and ballet-style pumps were decorated with a variety of detachable buckles made from metal and adorned with silver filigree, diamanté or marcasite. Once peace turned into declared, models speedy modified on the way to throw off the melancholy of wartime austerity.

**The 1920s** The 1920s turned into a time of terrific change, in the course of which more liberal perspectives on perfect dress codes were solid. Dance crazes just like the Charleston, which demanded a securely-fastened shoe with a low heel and a closed toe, motivated popular shoe layout highly. The discovery of ancient Egyptian Pharaoh Tutankhamen's tomb in 1922 served to inspire a love of all matters wonderful, and this was meditated in shoe designs of the age. Brilliantly-dyed leather, metallic finishes and brilliant fabrics had been used to create neverbefore-visible designs, and rich brocades, satin, silk and velvet were often adorned with metallic over stitching, embroidery and pretend gemstones. Heels were regularly adorned with crystals, regularly in Art Deco designs.

**The 1930s** This became a decade that noticed the sector plunged right into a economic depression after America inventory market crash of 1929. As inside the First World War years, footwear needed to remaining longer and sombercolours which include black, brown, maroon and army blue became general. In an try to introduce a new style, platform shoes first seemed in the 1930s and, whilst the world went to warfare once more in 1939, a shortage of leather-based and a ban on using rubber for non-important requirements compelled shoemakers to use wooden, cork and other materials for those platforms.



- **The 1940s:** With the Second World War dominating anybody's existence for a lot of the decade, shoes persevered to be austere, and it changed into viewed as unpatriotic to be very stylish at some point of this sort of time of shortage. In a whole lot of the world, leather-based become reserved for navy use, so shoemakers had to reveal initiative of their desire of raw substances. Reptile skins and mesh have become popular options. Rationing within the USA meant that shoe producers should only use heels measuring one inch high or much less, with a confined desire of colours.
- **The 1950s:** After the warfare, optimism was excessive and one of the fantastic icons of fashion footwear – the stiletto heel – gained a big following for the duration of the early a part of the decade. Flat pumps based at the ballet shoe regained their recognition and had been speedy available in an exceptionally various coloration range.
- **The 1960s:** Young humans all at once determined themselves with more money to spend. This led to a decade of fantastic alternate, with exceedingly experimental types of style, music, artwork and literature. Hot pants and miniskirts took the Western children market by using hurricane, with flat-heeled high boots proving specifically famous. The hippie subculture also have become a fundamental fashion and, because the race to be the primary at the moon multiplied, new metallic 'space-age' materials (together with lined plastic) had been an increasing number of utilized by the sector's shoemakers.
- **The 1970s** Celebrities dressed to shock within the Seventies, with punk and glam rock encouraging dramatic styles that speedy determined their manner onto the excessive road. Footwear designers working for such well-known figures as David Bowie and Elton John allow their imaginations run rebel, generating patterns that included eight-inch platform heels adorned with sequins. The start of disco demanded secure dancing footwear, and strappy sandals have become the choice of hundreds of thousands. Almost as a deliberate contrast to those outlandish fashions was a go back to Edwardianstyle pumps and squared-off ft paying homage to the Nineteen Forties, as well as neat court shoes for properly-dressed businesswomen. For the primary time, running became one of the global's maximum popular pastimes, and sports activities shoes commenced to promote by means of the million.
- **The 1980s:** A new group of formidable purchasers with money to spend – well-paid younger professionals nicknamed 'Yuppies' – looked to dressmaker labels to emphasize their rich status in lifestyles, and stores had been most effective too thrilled to deliver just what they desired. Many 'new' styles were absolutely updated versions of famous footwear from the 40's and 50s, with menswear influencing girls's fashions within the form of lace-up brogues. Moulded jellies have been first made throughout the 1980s, and have been advertised in a spectrum of colors.
- **The 1990s:** While a few glittering patterns continued to hit the high road, the excesses of preceding many years had been changed with the aid of extra sombre designs earlier than the quit of the millennium. A range of shoe fashion revivals happened, with 1970s-style chunky platform shoes regaining their popularity and pastel-coloured ballet pumps all over again proving to be the satisfactory buy. A perceptible change was visible in buying traits, with buyers of fashion footwear starting to look for extra than in reality appealing styling. Perhaps for the first time because the shortages of wartime, customers started out to call for consolation in addition to seems.



□ **The 2000s:** Heels started to upward push another time at the beginning of the 21st century, and the popularity of clothier labels confirmed no symptoms of flagging. Embellishment of footwear with crystals, beads, and embroidery and unusual leathers arrived over again – and has when you consider that proved to be a regular a part of the footwear designer’s palette.

### **The subsequent ninety years?**

The footwear enterprise, which for centuries had used traditional methods of manufacture, has virtually taken technology to heart in current many years, and this has significantly benefited each shoemakers and shoe wearers. Many adjustments were glaring – in all factors of layout, substances, and manufacture – but perhaps the best distinction is in which maximum of the arena’s shoes is now made. Many European and North American businesses in shoemaking and ancillary trades have both closed down or moved their flowers to the Far East.

Despite contemporary difficult financial situations, feedback from delegates at current shoes change suggests has been quite buoyant. As lengthy as manufacturers keep to design properly and check their new principles and existing styles carefully, they’ll offer what clients need – and that bodes properly for the destiny of shoes.

## **4.2. Advance Technology & Their Role**

### **4.2.1. Designing**

- 1) Foot Measuring Software
- 2) Shoe Design Software
- 3) Sole Design Software
- 4) Last Design Software
- 5) Plotters
- 6) Digitizers
- 7) 3-D Printing

CAD/CAM in the footwear industry is the use of computer systems and images software program for designing and grading of shoe higher styles and, for manufacturing of cutting dies, shoe lasts, and sole moulds CAD/CAM software is a PC-based gadget, that’s made of software modules Today, there are 2D and 3-d versions of CAD/CAM systems in the shoe enterprise. Computer aided design became delivered within the shoe enterprise in the Seventies. Initially, it changed into used in general for sample grading. It enabled producers to carry out complicated grading fantastically without problems and fast. CAD structures nowadays have been evolved with a miles wider variety of capabilities. Logos, textures and different decorations can be integrated into product designs of bothThe uppers and soles to assist enhance branding on all regions of the model. It automates ordinary approaches, growing pace and consistency at the same time as lowering the possibility of mistakes. CAD facts can now be used efficaciously for a extensive sort of activities throughout footwear manufacturing enterprise. CAD/CAM generates records on the design level, which can be used right via the planning and manufacturing degrees. Latest enhancements in the CAD/CAM era are:

- Graphics talents and interconnectivity have advanced highly,
- Software developments have regularly made systems greater intuitive and easier to use,



□ With 2D sketch and paint modules, a serviceable comic strip may be produced after which color and texture may be delivered.

□ 3D structures allow the last and design to be considered from any perspective and several angles even simultaneously. With CAD/CAM software, footwear producers can reduce their time to market dramatically and so growth marketplace proportion and profitability. In addition, the strength and versatility of the software program can conquer restrictions to the dressmaker's creativity imposed by using traditional methods. CAD/CAM software can be used to generate machining facts for shoe sole models and moulds Shoe sole mildew makers are able to reinforce their abilities of mildew design and manufacturing techniques to fulfill the market demands for shorter product lifestyles cycle, first-rate improvement and managing versatile sample design. This helps specially sports activities shoe manufacturers to fabricate merchandise rapidly and to introduce them earlier than their competitors. 3-d CAD/CAM is the center generation for shoe sole mold in the shoes industry and develops closer to specialization.

Benefits of CAD/CAM within the mould manufacturing are:

- Total modeling for rapid era of design principles and variations,
- Reverse engineering from present models or components,
- Easy design change and morphing functionality,
- Completely correct designs no matter complexity,
- Group grading of soles and uppers,
- Advanced adorning techniques,
- Realistic onscreen visualization,
- Rapid generation of molds from product designs.

#### **4.2.2. New Technology in Last Design**

The first level within the shoes production system is the manufacturing of the remaining. In pre-first international war Europe, lasts were frequently made from cast iron. As the battle started out to dissipate great quantities of metallic, timber turned into used more frequently and have become the favored material from 1919. This become often maple, sourced from Canadian forests that during many instances have been owned by using the remainingProducers themselves. Copy lathes allowed lasts to be produced unexpectedly following theadvent of a efficaciously-sized version There became no vast further exchange in the way lasts were made till the Second World War while the primary business plastics started to be made. Following the stop of the battle, brittle thermoplastics were used to make lasts until the early Nineteen Sixties. At that time, polyethylene became used for the first time, which proved to be a long lasting and difficult cloth. Later, injection moulding speeded up the procedure, with a kind-of-shaped block being turned all the way down to an correct ultimate. Between 50 in line with cent and 60 per cent of the material become cut away during this procedure, however this become reusable. Today, manufacture of lasts is a fast technique. Computerized digitizing permits for the scanning of a version final so it could be reproduced appropriately at the display The software may be used to manage the closing in virtual shape, changing such factors because the heel height or including an allowance for an insock. Data saved in a program can be used to reduce accurate lasts quickly, with contemporary equipment permitting some of different sizes to be formed at the



identical time. In addition, digitized ultimate facts may be shared by using e-mail among last producers around the arena. The final making turned into once a craft desiring the skilled capabilities of a foundry employee and a wood worker. At the start of the 20th century, forged iron lasts have been made in some of sections which have been then regularly fixed together with interlocking pins. This allowed for the closing to be taken apart with a purpose to remove it from the partially-completed shoes without inflicting an excessive amount of damage. Wooden lasts additionally had been designed to be damaged down, with detachable 'scoop blocks' held in area by screws or brass springs. Today, plastic lasts are typically hinged to permit removal after the shoemaking system, even though within the Far East, lasts are very regularly made from strong polyethylene to hurry up the process. In the early part of the 20th century, a properly-made last would live in use for 25 years and may have remained in an character shoe being manufactured for three to 6 months. Because of this, plenty of lasts become wanted. Today, a standard shoe remains on a closing for a most of 20-half-hour, due to the usage of a heat-setting procedure for the duration of shoes production.

#### **4.2.3. The Arrival of Alternatives to Leather**

Animal skins have long been used by guy as a protecting masking. When skins have been first tanned to provide leather-based, this new cloth mixed a stage of water resistance with suitable insulation and wind resistance, water vapour permeability and high absorbency, in addition to being flexible enough to be fashioned and set into the desired shape. Demand for proper-great leather-based, at the side of rumors of a capacity shortage, led a few companies to discover the possibility of manufacturing an less costly alternative to this traditional cloth, which should in shape the homes of leather-based. After the Second World War, a wide range of artificial materials derived from the petrochemical enterprise regarded in the marketplace. Inexpensively made, these had steady houses. An early attempt to produce a leather-like material involved bonding a fabric base to a polymeric coating. One of the first of these become PVC polymer coated Fabrics (PVCCFs), which gave an imitation of the flesh and grain of the leather. Such early substances had desirable abrasion resistance, but low water vapour permeability, negative flex crack resistance and were bloodless to the touch. Polyurethane lined Fabric (PUCFs) were evolved within the 1960s and were an improvement on PVCCF. Originally, the materials were made through casting a polyurethane film, which become then caught to the material base with an adhesive tie coat. These materials had more of the feel and appearance of leather, and additionally had a degree of water vapour permeability. Further advances were made with the aid of using a brushed material because the substrate to give progressed appearance and take care of. One of those developments became coagulated PUCF, in which an organic solvent answer of PU turned into carried out to a brushed material. It changed into then immersed in a non-solvent for coagulation, which resulted within the formation of a porous shape. This extended each the flexibility and water vapour permeability and gave a more leatherlike appearance. Poromerics (micro porous synthetic leather-based substitutes) were developed inside the Sixties and 1970s and were intended to be an development overcoated fabric. They had been described with the aid of SATRA in their advent as 'a man-made shoe upper fabric, that's usually similar in nature and appearance to leather-based and, specifically, has similar water vapour permeability'. The application of lined fabric became confined by means of the homes of the knitted or woven base fabrics. Poromerics used a nonwoven fabric



impregnated with the polymer (commonly PU), consequently producing a greater leatherlike cloth. A huge range of poromerics with diverse systems changed into evolved. The nonwoven substrate supplied the closest simulation to the fibre shape of leather-based but required significant degrees of the binder. The Goal turned into to growth the diploma of interweaving and reduce the need for impregnation. Advances maintain, with the improvement of micro-denier fibres, which are being used to produce materials with traits lots in the direction of leather. Later trends consist of using hydrophilic fibres to enhance consolation with the aid of generating more absorbent substances, permeable however abrasion-resistant topcoats to mimic the grain, new impregnation techniques, hydrophilic PU formulations and water-primarily based structures. As nicely as being selected for most of the people of footwear uppers, the leather were the material of preference for solings till it initially encountered severe competition from rubber inside the 1930s. At first, soles had been cut from natural crepe rubber – a cloth shaped from natural latex tapped from rubber bushes – which has low degrees of resistance to solvents and oils, but is both durable and bendy. Quite quickly thereafter, gadgets have been being crafted from vulcanized herbal rubber compounds fashioned the use of heat and stress. Vulcanized artificial rubbers including styrene-butadiene rubber were then evolved, as became rubber reinforced with high-styrene resins (resin rubbers) which supplied tough, skinny sheet solings that have been leather like in both experience and appearance. In the Sixties, thermoplastic solings started to be evolved. The first of these – PVC (polyvinyl chloride) and TR (thermoplastic rubber) – allowed sole manufacturing with quicker and cheapertactics than have been required by vulcanized rubber. Polyurethane (PU) solings have been added at the give up of the 1960s. Most familiar in reactionmoulded mild-weight microcellular shape, polyurethane is likewise utilized in thermoplastic grades (TPU). Since the overdue 1970s, microcellular EVA – ethylene vinyl acetate – in move-related form has proved famous as a light-weight soling material. Developments over the last a long time of the 20th century saw the advent of mild vulcanized rubber ('latex' rubber) as an opportunity to TR, and polyolefin elastomers (POE) – elastomeric sorts of polypropylene combined with ethylene-propylene rubber.

#### **4.2.4. Developing New Machinery**

The demands made with the aid of using revolutionary designers of current footwear have compelled the development of new technology – from the advent of large computerized footwear-moulding machines to an development inside the high-quality and energy of a number of the smallest elements of the shoemaking procedure – which includes the needles used in the stitching technique and threads which additionally have extra colour resistance than the ones used in years long gone through way of. There were a number of resourceful and quite state-of-the-art shoemaking machines invented with the useful resource of 1910. These protected numerous heel building and heel attaching machines, stiffener moulders, and sole moulders finishing machines, buttonhole sewing machines, eye letters and skivers. To aextra or lesser diploma, those strategies have remained very similar even into the twenty first century. After cement sole attaching structures were introduced within the mid-Twenties, various sole and shoe bottom roughing and cementing machines have been superior, in addition to a widespread shape of attaching presses. Between 1950 and 1960, immoderate-pressure rubber moulding and vulcanizing machines, mixed with the creation of the pre-completed sole, similarly to Louis heel and sole units, made large impact on the footwear industry. The decade fundamental up to 1970 noticed the advent of PVC injection moulding systems,





which have been followed with the aid of manner of the polyurethane reaction injection moulding (RIM) way. The arrival of moist warmness putting, invented via SATRA (and for which the Technology Centre acquired the Queen's Award for Industry in 1969), dramatically reduced the setting time – and finally, the range of lasts required – and is identified as one of the extraordinary landmarks in shoes manufacture. In the sphere of higher preparation, the broader use of synthetic substances added approximately the use of travelling head slicing presses and, in flip, to strategies concerning excessive-frequency lowering, welding, and embossing. In lasting, the advent of lower back-element moulding and seat lasting machines found by using developments in forepart pulling and lasting machines – each now with incorporated hot-melt cement structures – have additionally completed a good buy to regulate the appearance of the current shoe production facility. In cutting-edge years, computerized machines controlling such approaches as pattern reducing and decorative sewing are very commonplace round the arena. Little had altered in sewing machinery for more than half of the twentieth century. Up until the Nineteen Seventies, operatives used electric powered take preserve of-driven Machines, which took fantastic skill and enjoy to obtain the best velocity. Things modified in the Seventies when the primary digital stitching machines were added, allowing the operator to range the sewing pace by means of the use of a foot pedal.

#### **4.2.5. Testing Comes of Age**

Chemical testing of footwear and additives performs a critical function within the manufacturing of well-made footwear and boots. Perhaps distinctly, a laboratory from the Nineteen Forties could have appeared little unique from one in the Sixties, with traditional moist chemistry, the usage of burettes, flasks, and Bunsen burners being the order of the day. Things started to trade within the mid-Nineteen Sixties, with the introduction of the primary infrared testing gadget. Many new take a look at methods – previously impractical to perform – had been developed for the duration of this period, taking gain of the supply of greater sophisticated evaluation strategies. At final, polymers could be accurately recognized, as should floor contaminants. Such quickly gained know-how introduced wonderful blessings – as an instance, the development of chemical adhesion – and, in the mid-Nineteen Eighties, chemical testing turned into similarly revolutionized with the advent of chromatography. Bigger and higher equipment particularly advanced within the pharmaceutical and petrochemical industries fast observed an utility in shoes and leather-based testing. One of the significant adjustments in chemical testing nowadays is the capability to discover quite minute quantities of certain substances. Twenty years ago, heavy metals will be recognized to zero.01 according to cent. Modern, tremendously-touchy gadget can these days discover heavy metals in parts in keeping with million. Also, while evaluation of natural chemicals turned into previously very rudimentary, now the detection of insecticides, fungicides, antioxidants, dyestuffs and flame retardants is everyday practice – both qualitatively and quantitatively. SATRA's paintings within the area of chemical checking out (in particular on discoloration in footwear and detection of banned chemical compounds) remains of great help to our members. "SATRA permits members to live abreast of current chemical checks, and we are a world chief in check information," says Richard Turner, who helped expand SATRA's chemical and analytical generation facility earlier than his current retirement. "We have the first-rate-restrained materials listing in the international and are viewed by many because the 'fount of all understanding' when it comes to such exams. "Some varieties of evaluation, inclusive of for extractable fats in



leather, still use conventional wet take a look at strategies, and it's miles possibly that generation becomes even greater sophisticated inside the destiny," he keeps. "Legislation is getting ever tighter, with some assessments seeking out results in parts in line with billion!" Physical testing of entire footwear and components has additionally advanced past popularity in recent years. From its established order in 1919, SATRA has been figuring out and fixing checking out issues confronted by means of shoes producers. In latest decades, modern era has outdated simple mechanical testing of many gadgets, offering get right of entry to computerized tests and giving incredibly correct consequences. Sophisticated whole-shoe exams, which include the Advanced Moisture Management Test (AMMT) and PEDATRON sole abrasion test were advanced by using SATRA, providing speedy analysis of footwear issues that previously took months of wear and tear trials to set up. SATRA remains on the vanguard of take a look at equipment improvement and keeps to introduce new developments into the shoes industry.

#### **4.3. Factories on the Move**

For most of the twentieth century, the main shoes-producing companies had been positioned in Europe and the United States. Whilst there was a small proportion of the overall international shoe production coming from Asia, the conventional strongholds of Italy, France, the UK, Spain, America, and Germany produced the general public of shoes until the early 1970s. Then, India, South Korea, and Taiwan spread out to the Western-fashion mass production of first-rate leather goods, observed quickly afterwards by means of China.

## **5. CONCLUSIONS**

Advanced technology within the area of footwear layout, shoes construction, preservation, and operation of footwear generation. New equipment and techniques have the capability of accomplishing fee savings and productiveness upgrades in addition to permitting new trends in Footwear quarter. There is a standard feeling the footwear industrialist that the a whole lot of the future increase and improvement in footwear quarter could depend upon how efficiently these new technologies are followed within the shoes sector. The primary cause of the paper become to study the areas in which superior technology can drastically have an effect on the way shoes industrialists is practiced. Advance generation is likewise liable for the productivity improvement. Now a day the operating circumstance is very fast. The high-quality as well quantity of the product is also advanced via the development generation; it's also decreasing the manpower requirement within the industry.

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