

Towards excellence in sports





Ushering in an era of sustainable sporting excellence for Indian women

Women's sports are seeing quite a revolution in India. At the turn of the millennium, something unprecedented happened — an elusive Olympic medal was won by an Indian woman for the first time when Karnam Malleswari won a bronze at the 2000 Sydney Olympics in weightlifting. Since then, Mary Kom and Saina Nehwal in London 2012, PV Sindhu and Sakshi Malik in Rio 2016 and most recently, Mirabai Chanu, PV Sindhu and Lovlina Borgohain in Tokyo have brought Olympic success to the country.



India's performance at the Tokyo 2020 Olympics was its best ever, and we saw maximum participation across sporting events. This was also the first time that we won Olympic medals in six disciplines – hockey, wrestling, boxing, badminton, weightlifting, and track and field. Out of the seven medals won by India, women bagged three medals - a performance which can now be the springboard towards even greater success for Indian women athletes on the global stage.

The grit and determination shown by the women athletes to achieve podium finishes will create a strong foundation for more women from the country to participate and excel in sports.

Initiatives such as a targeted training approach towards podium finishes, dedicated funding programmes for women, use of data analytics and specific institutional support have contributed towards sporting excellence for women across the world. Initiatives by various countries range from dedicated funds for young girls to participate in water sports, to industry-sponsored high-quality archery equipment provided to archers, and special funds for mothers participating in the Olympics supported by a leading sportswear brand, among several others.

Over the course of the Tokyo Olympics, we researched various practices, initiatives and examples of institutional support that have been provided to female athletes by governments as well as the private sector, contributing towards the development of the sports ecosystem as well as excellence.

The aim of this publication to share some of these initiatives which could be introduced, replicated or expanded in India for not just promoting participation of women in sports but also ensuring sustained excellence at global mega sports events.

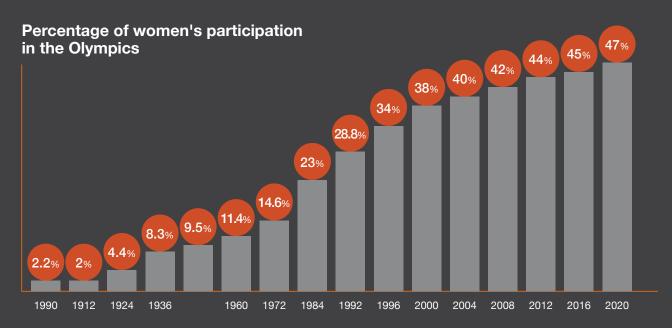
Happy reading!

Shivanshu Chauhan

Partner and Leader – Sports Advisory PwC India shivanshu.chauhan@pwc.com

Women's participation in the Olympics

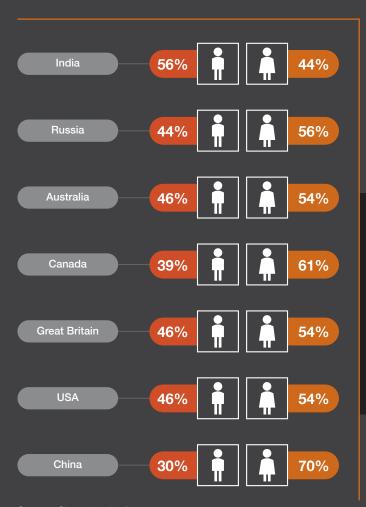
Women's participation in sports has grown over the years from no participation in the first Summer Olympics to almost 50% women athletes at Tokyo 2020.

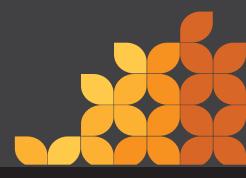


Source: Olympics database

Upholding the 'gender balanced' games theme of the Tokyo Olympics, some of the large countries such as China, the USA, Australia, Great Britain and Russia had a larger contingent of women players, as can be seen below:

Gender equity at Tokyo 2020 - number of athletes





In terms of performance, women athletes also won more medals than their male counterparts for some of the top-performing nations. For instance, of the 39 gold medals won by the USA, as many as 23 were won by women athletes. Similarly, in both China and Japan, women athletes bagged more medals than their male counterparts.

Source: Olympics database

Initiatives promoting women in sports

Various countries have taken a variety of institutional initiatives towards promoting women in sports. We have shortlisted a few that have high replicability in the Indian context, as summarised below.

This section covers examples of such institutional initiatives as well as the stupendous performance by women in various Olympic sports. These have been compiled with the aim of learning from and replicating the success stories towards promoting women's participation in sports in India.

1 Funding, scholarships and grants

Dedicated monetary support in the form of funding, scholarships or grants for women athletes have created a difference between

participation and podium success.

2 Training facilities, academies and institutes

Access to state-of-the-art sports academies, institutions and training facilities dedicated to female athletes have created a significant difference.

3 Role of corporates

Dedicated corporate-funded programmes to provide access to sports training have contributed to significant success for women athletes around the world.

4 Training/performance programmes for specific sports

Training programmes tailored to specific needs and type of sport played by women have helped improve their mobility, speed and endurance, leading to podium success.

Talent identification at young age

Talent scouting at a young age has helped female athletes from nations such as Australia and China dominate sports on the global stage.

Federations and clubs

Incentivising federations and clubs to set up dedicated programmes for training and competitions for women have helped nurture talent and achieve success.

Promoting equality in sports governance

Sports federations and international organisations are making gender equality a reality in and through sports. This is making a significant difference towards increasing participation of women in sports.

University research and innovation for enhancing performance

> Universities around the world are using their research capabilities and resources to bring in innovations that are acting as a catalyst for improvement in the sports performance of women.

Campaigns for promoting specific sports amongst women

> To increase women participation in sports, nations are running focussed campaigns on promoting specific sports that are easily accessible and popular.

Recognising and popularising success of women athletes

> Celebrating the success stories of women athletes inspires future generations, and countries around the world have been recognising and popularising the success of women athletes in several unique ways.



Archery

Creating a team to beat them all

Korea has around 30 training centres for women's archery in both the recurve and compound categories. These centres are sponsored and run by government authorities or by corporates from various sectors of Korean industry.

This has enabled the continued dominance by Korean women's teams, who have bagged nine out of nine gold medals at the Olympics so far.

Hitting the sweet spot

India's Deepika Kumari, started practising on home-made equipment, using mangoes as targets when she was 12 years old. She was a strong favourite to win a medal at Tokyo 2020.

Artistic

Striking the perfect balance

Nadia Comaneci became the first and the youngest woman ever to score a perfect ten in the Olympic gymnastics competition. She went on to secure a perfect ten six more times in the same edition and continues to remain the youngest all-around Olympic gold medallist.

An innovator acrobat, Comaneci has two elements named after her, including a straddled front salto on the uneven bars. Her outstanding accomplishments led to major changes in the code of points in 2006, leading to an open-ended system.

mnastic

Raising the bar higher

The USA Gymnastics Women's Program (USAGWP) is a platform for gymnasts, coaches and judges, as well as gym club owners and administrators. It provides support and training through the USA Gymnastics University. Targeted at the identification and promotion of young female gymnasts, the Talent Opportunity Program of the USAGWP provides a platform to 200,000 athletes as it funds and organises more than 4,000 competitions and events at all levels throughout the country every year.

Vaulting her way to glory

As an eight year old, **Pranati Nayak** was rejected by a coach for being too thin. Fast forward to today, at 26, Pranati was the only female gymnast from India at the Tokyo Games and only the second woman gymnast to represent the country at the Olympics. A tattoo on her right ankle serves as a constant reminder of the things that she hopes to achieve. As per her, "I decided to get a fairy inked because I'm a gymnast. I want to soar high on the vault when the moment comes." You go, girl!



Athletic

The fastest woman in the world

As a child, doctors told Wilma Rudolph that she would never walk again after a bout of severe illness. Determined to make a career as an athlete, she recovered fully and went on to compete in the 1956 Olympic Games and won a bronze medal in 4x100 relay. In the next Olympics, she won three gold medals and broke three world records.

Her performance in Rome cemented her reputation as one of the greatest athletes of the 20th century and also earned her the title of 'the fastest woman in the world'.

A champion of motherhood

Allyson Felix is one of the most decorated track and field athletes of all time, with six gold and three silver Olympic medals. After having a fallout with her sponsor over its maternity policy, she partnered with her current sponsor – Athleta – to create a fund to support female athletes with children. Six such athletes competing in Tokyo 2020 received USD 10,000 each towards childcare costs from the fund.

Beyond CSR: redefining the landscape

Iberdrola, a Spanish multinational electric utility, is a key driving force behind women's badminton in Spain. The company funds Copa Ibedrola de Clubes – the championship, players and participating staff.

In 2016, Iberdrola became one of the first companies to make a firm global commitment towards the equality and empowerment of women through sport. 'Badminton Europe' awarded the 'Badminton for Women Award 2017' to Iberdrola's initiative, 'Women, Health and Sport', which helped more than 5,000 women learn and play badminton.



Badminton

India's golden girl

PV Sindhu is the first Indian singles badminton player to have won an Olympic Silver and Bronze and is one of India's most successful women athletes of all time. Such was her resolve and passion that during the early stages of her career she used to travel 30 km twice a day daily to train. Sindhu is a recipient of the Rajiv Gandhi Khel Ratna, India's highest sporting honour and also the Padma Shri and Padma Bhushan.

Against all odds: data analytics helps create Badminton history

Before 2016, every single gold medallist in women's singles was Asian. This was until Spain's Carolina Marin won a gold medal at Rio 2016. For 15 years, Marin has been harnessing the power of data to monitor her physical fitness and create pre-match strategies against rivals. Artificial intelligence (AI) and virtual reality (VR) allow Marin to virtually experience a game before it even happens!





Data powering a champion

iBoxer, a software application developed in collaboration with Sheffield Hallam University, made use of a wealth of data on Team Great Britain boxers and their opponents. These insights helped **Nicola Adams** refine her technique and retain her gold medal at Rio 2016.



Laying a strong foundation

The USA has set up the USA Boxing Foundation (USABF) to support the sport of amateur boxing. The USABF has provided over USD 420,000 to build women's boxing programmes nationally. The beneficiaries have won two gold at the two editions featuring women's boxing that have been held thus far.

Punching above her weight, literally

Newborn twins and the daunting task of moving from 51 kg to her usual 46-kg/48-kg category did not deter Mary Kom, who became the first Indian female boxer to win an Olympic medal when she won a bronze in 2012. A member of parliament now, Mary Kom has also created a foundation to train and develop talent.



-encino

Federation upping the Fencing game

Italian women athletes have won 27 Olympic medals in Fencing. That's more than the total medal tally of 90+ nations over the years! The Italian Fencing Federation has more than 20,000 members and more than 300 clubs across the country. This network of clubs allows the federation to provide world-class training and organise competitions that prepare women athletes for international events.

The woman pioneer

From practising with bamboo sticks to training with the world's best at Italy, Bhavani Devi has come a long way! She is the first-ever Indian to qualify for the Olympics in fencing. Her performance at the Olympics was worth the wait, and she won India's first-ever fencing match at the Tokyo Olympics.



Marvellous Marta

Widely regarded as one of the greatest female footballers of all time, Brazil's Marta scored in her fifth successive Olympic appearance in Tokyo. She is the first ever footballer to achieve the feat. She has two Olympic silver medals in her cabinet.

Policy changes pushing US women to the top

Title IX of the Education Amendments Act of 1972 ensured women had the same rights as men in terms of school and university sports programmes, which saw football take off.

The NCAA seized this opportunity and sponsors 1,038 colleges and universities, which has led to dominance of US Women's National Football team on the global stage.



A golfer 'par' excellence

At just 23 years, Aditi Ashok has already played 15 Majors, Golf's most prestigious tournaments outside of the Olympics. She was the first and only Indian golfer at the Tokyo Games 2020. It was a matter of pride for our country as she finished fourth in Tokyo after having trained all by herself in the last five years.

Korea Golf university

The Republic of Korea has maintained its prominence in Golf with a dedicated university. The university offers specialised residential training programmes for both male and female golfers, preparing them for the Olympics and other international events.

This university has the distinction of having partnered with the e-vehicle manufacturer CT&T to set up a 'Golf Dream Team' for competing in the Olympics and other national/international events.



-landbal

Dazzling Danes

Having originated in Denmark, handball is a very popular sport in the country. The Danish women's team has won more medals than any other country in either the male or female categories, making it the most successful team at the Olympics.

Five interventions have played a key role towards

Danish dominance in the sport:

- Private investments in women's Handball
- Retention of local talent
- More opportunities for young players
- An established club system
- The success of the Danish Women's Handball League.

Eyes on the rise

The Korean women's team is the joint most successful handball team in in terms of number of medals won. The Korean Sports Science Institute, through its research and innovation, has helped the team develop its own style of play, mastering speed, skill, fast breaks, precision shooting and defensive discipline - overcoming a physical disadvantage compared to its European counterparts!





Show of strength from Indian women

India's 16-member women Hockey team (comprising eight debutantes!) was a force to reckon with.

The team's determination was on display as they narrowly missed a medal and achieved the best finish in the history of the games.



The GB Elite Development Programme (EDP), part of the performance framework, has been instrumental in helping athletes transition from national to international hockey tournaments. This programme is funded by UK Sport and National Lottery.



The Judo temple

Founded by Kano Jigoro in 1882, the Kodokan Judo Institute in Tokyo is the headquarters of the global Judo community. Kano's legacy and contribution to Judo has been immense. His championing of women's Judo has borne results, with Japan bagging 11 gold medals and emerging as the most successful country in women's Judo events at the recent Olympics.

A leader on and off the Judo mat

When Ryoko Tani defeated the four-time world champion Karen Briggs at Barcelona '92, it was one of the biggest upsets in Judo. Tani went on to become one of the most successful Judoka, winning five Olympic medals, including two gold medals and a record seven world championships. A leader on the field, Ryoko Tani has since gone on to serve in the House of Councillors, the upper house of the Japanese parliament.

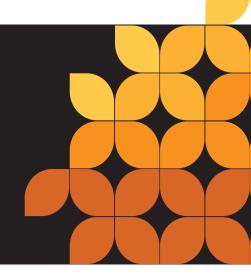


Karate

Fighting stereotypes

Age is no barrier when it comes to top performance by women athletes.

Meet Sandra Sanchez from Spain. She is 40, her country's oldest-ever Olympian. Sandra started practising karate at the age of four. She won a record 36 medals in the sport's top-billed Karate 1 Premier League. She won the first-ever Olympic Games Karate gold at Tokyo, ensuring a place for her name in the sport's history books!



Sport as a tool of empowerment

Ana Maria Stratu set a great example of how an individual can use sport to contribute to physical, educational and social development. To make Karate more accessible to women in Moldova and use her sport as a tool of empowerment for girls and women, Stratu organised an international Women's Karate Festival which saw participation from more than 50 athletes. Since initiating her projects, the Moldavian athlete has seen Karate receive greater support within her country. Promotion at the grassroots level has helped in breaking social barriers and protecting women against violence.

Your numbers make amazing things happen

The National Lottery Community Fund changed the landscape of British rowing forever. Awarded equally to male and female athletes, it was the first formal long-term programme that focused on developing the potential of women rowers. The programme provided better facilities, regular training and paid coaches. Since the introduction of the National Lottery Community Fund, Great Britain has won 27 Olympic medals for rowing. During 2016 to 2020, Rowing alone has received funding worth GBP 24,655,408 in the UK – that is, funding worth more than INR 250 crore for the Tokyo Olympics!



Rowing

Mum on a mission

Ranked the number one female rower in the world since 2015, Helen Glover is a two-time Olympic champion, triple world champion, quintuple world cup champion and quadruple European champion. At Tokyo 2020, Glover, a 34-year-old mother of three, became the first British mother to row at the Olympics.



From refuge seeker to player of the year

A troubled childhood, alcoholic father and abused mother forced Ruby Tui to seek shelter at a women's refuge. Starting off as a netball player, she discovered her love for Rugby through the refuge. Her eccentric nature and natural leadership qualities have helped define a dominant group that has won a World Cup, the Commonwealth Games, several world-series titles, and an Olympic medal.



New Zealand emulating the National Collegiate Athletic Association (NCAA) model

The national sport of New Zealand, Rugby is deeply rooted in the country's culture and practised actively across the country from a young age. Known for its inclusivity, New Zealand has a strong competitive structure that exposes women players to high-level competition, which helps identify the best young talent.

Taking cues from the NCAA model in the USA, high schools offer scholarships to recruit the best talent and hone them for the national team. Even high school matches are attended by big crowds and broadcasted on TV.



Sailing

Conquering on a borrowed boat

Nethra Kumanan became the first-ever Indian woman sailor to qualify for Tokyo 2020. Such was her resolve to compete that she trained and excelled on a borrowed boat.

A sailing institute led by Olympians, for Olympians

The European Sailing Academy is truly one of its kind, offering 360-degree coaching, including performance control, fitness coaching and recovery facilities. Athletes from 27 nations have been trained here, including Nethra Kumanan. This institute alone has contributed to 15 podium finishes!



Sharpshooters' academy

The Olympic Training Center (OTC) in Colorado, is the headquarters of USA Shooting (USAS), the national governing body of shooting in USA. Built in 1985 at a cost of USD 2.7 million, the US Olympic Shooting Center in the OTC hosts elite shooters and Olympic medal hopefuls for year-round training programmes. Since its inception, the US team has won over 50 Olympic medals in shooting, including 6 individual medals by Kim Rhodes, across six editions from Atlanta 1996 to Rio 2016.

Shootina

The trailblazer nurse

A nurse, a US Army officer and an Olympic medallist! Yet, the most special achievement of Margaret Thompson Murdock was that she became the first woman Olympic medallist in shooting while shooting was still a mixed sport and she achieved this despite competing against men with access to better training facilities and more experience.

The young gun

At 19, Manu Bhaker was one of the youngest sportspersons representing India at the Tokyo Games.

Having won a gold at the Commonwealth Games 2018 at the age of 16 and nine gold medals and two silver medals at the International Shooting Sport Federation (ISSF) Shooting World Cups, Bhaker was one of India's medal hopefuls in Tokyo. She is already a role mode for young shooters in the country.



climbing

Climbing her way to the top

Having scaled buildings and trees, Akiyo Noguchi has won four titles at Bouldering World Cups.

The Japanese climber made a mark with her nine consecutive wins at the Bouldering Japan Cup, a feat that no other athlete has been able to match or beat. She was also the first female sport climber to win a gold medal in a combined event at the 2018 Asian Games.



The Tata Steel Adventure Foundation (TSAF) has set up India's first residential sport climbing academy at Jamshedpur. The academy is one of its kind, providing athletes with access to professional training support, accommodation, education, food, counselling, travel for international training, gear and infrastructure.

The academy trains both men and women with equal focus and opportunities. TSAF trainees have already won 20 medals at the National level and more than 50 medals at the Zonal and State levels.



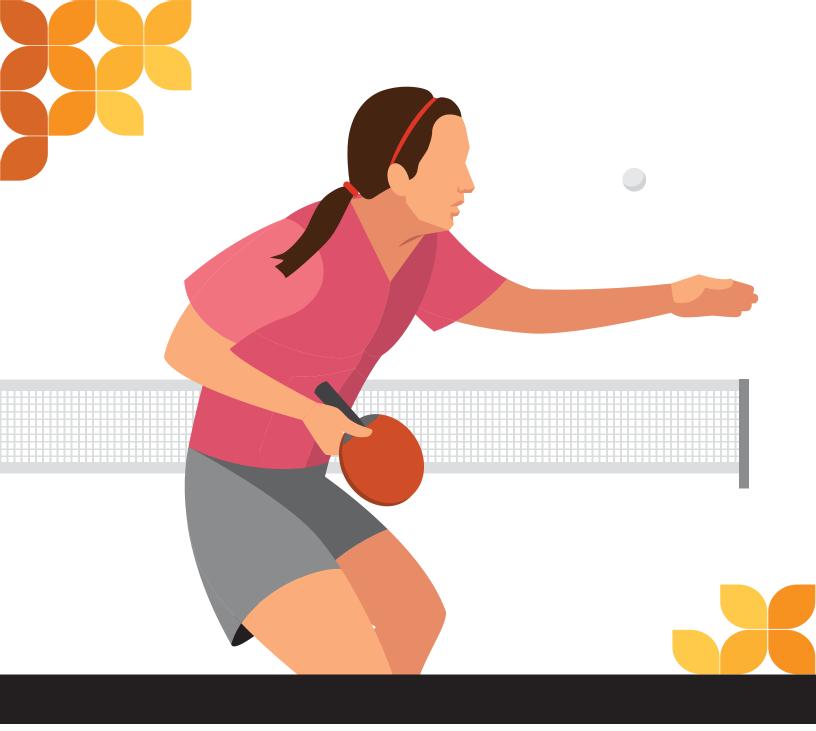
Swimmin

Building legacy one stroke at a time

A world record holder in 400m', '800m', '1500m freestyle swimming, Katie **Ledecky**, a five-time gold medallist, is one of the greatest female swimmers in recent times. A Stanford graduate, Ledecky has the distinction of being chosen as ship sponsor of a US Navy aircraft carrier.

Rebuilding trust

Swimming Australia (SA), in partnership with a few other organisations, conducted a study to understand the barriers for women to take up coaching roles. Based on the findings over the years, in 2011, SA started a Female Coaching Scholarship to increase the quality and number of coaches. As a result of this scholarship, Australia boasts of as many as 5,500 women coaches and 2,000 female technical officials. This has had a two-fold impact, with women being able to achieve their career goals and also a tremendous increase in women participation at the grassroots level.



able tennis

Redemption for the queen of hearts

Known for her 'backhand tomahawk' serve, 'queen of hearts' Ding Ning was a favourite to win a gold medal at London 2012. In the final, she was served three penalty points, including one for service violation, which led her to break down and lose to Li Xiaoxia. Fast forward to Rio 2016, Ding Ning clinched a gold against the same opponent and thus redeemed herself.

China schools the world

Chinese women paddlers have won 14 out of 14 gold medals since Barcelona 1992. China Table Tennis College has been key to the country's recent success. Talent identification of potential athletes starts as early as six years, which has led to the creation of a strong talent pool of as many as 20,000 competitive young Table Tennis players in the country.



No medal, but a winner who's incredible!

Charlotte Cooper from the UK was the first woman to win an Olympic gold at an individual event, winning the tennis women's singles title at the Paris 1900 Games. Interestingly, the tennis superstar did not receive a medal because medals were not given out until the next games in St. Louis in 1904! What is more inspiring is that Charlotte lost her hearing at the age of 26 and still she went on to win several accolades, including the Olympic tournament.

ennis

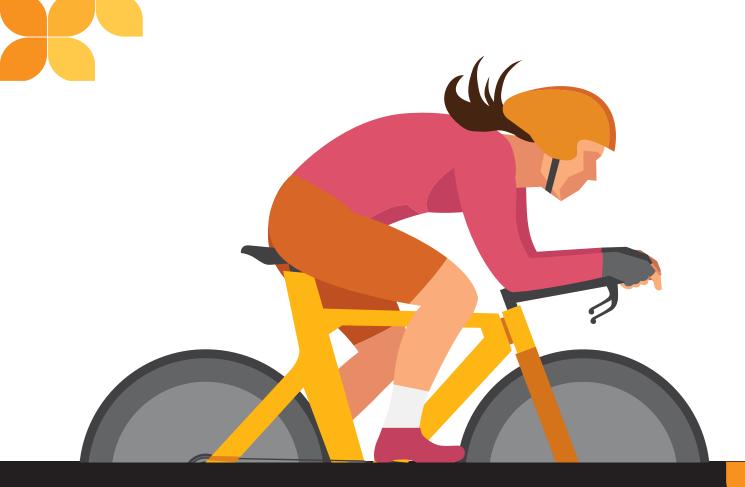
Serving excellence from the grassroots

The IMG Academy in Florida, USA, founded by Nick Bollettieri has produced more than ten top-rated tennis players, including legendary women athletes such as Jelena Jankovic, Maria Sharapova, Monica Seles, Serena Williams and Venus Williams. The academy has a one-of-its-kind boarding school which conducts training camps at all levels, thus creating a Grassroots stimulus. The Nick Bollettieri Family Foundation has extended the programme to some of the poorest neighbourhoods of the country.

Volleying above barriers

Sania Mirza is the only Indian woman to have won both a World Tennis Association (WTA) singles and doubles title. She is the first-ever female player to represent India at four Olympic games. Sania has won a total of 23 junior titles and 14 medals at major elite sport events. She is also an Arjuna and Padma Shri Awardee.

Mirza has had to overcome several physical and mental health issues throughout her career and continues to compete at the highest level.



Pedalling her way to greatness

Born four weeks premature with a collapsed lung, Laura Kenny developed asthma soon afterwards.

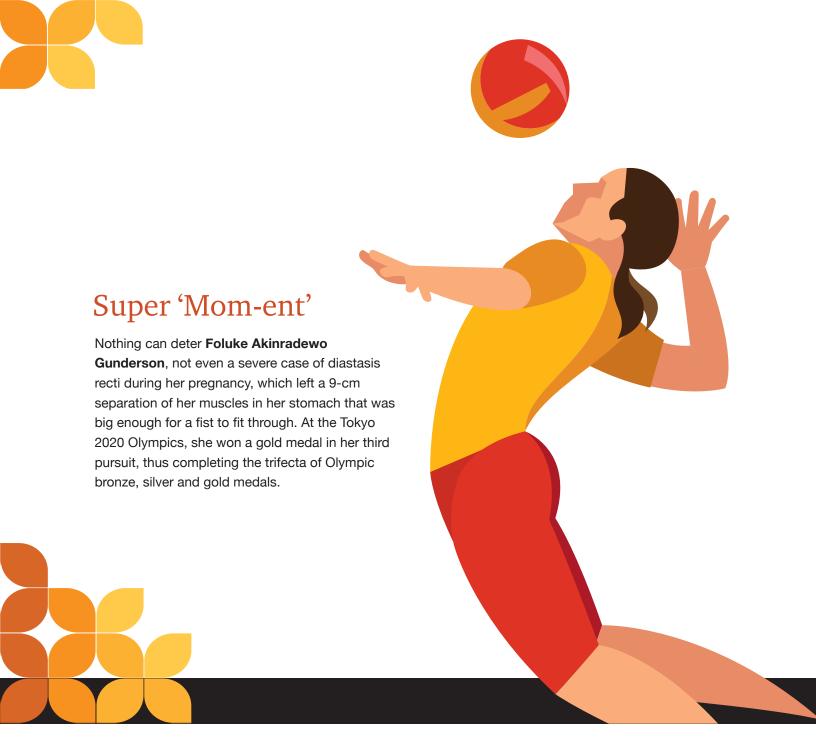
Not many would have imagined that young Laura would go on to become one of Great Britain's most decorated Olympic athletes. **Laura Kenny** has fought all the odds on her path in order to win four Olympic gold medals in track cycling for Team GBR. In Tokyo, Kenny aimed for a fifth gold to overtake Leontien van Moorsel, but had to settle for a silver medal.



The aggregation of marginal gains

"If you break down everything you could think of that goes into riding a bike, and then improve it by 1%, you will get a significant increase when you put them all together," that's Dave Brailsford's philosophy of 'the aggregation of marginal gains'.

In 2003, when British Cycling hired Dave Brailsford as New Performance Director, the British riders had won just one cycling Olympic gold medal. Since then, following the philosophy of marginal gains, women cyclists of Great Britain have gone on to win eight gold medals in the Olympic Games. British cyclists added three more gold medals to the tally, further reinforcing the success of Brailsford's philosophy and establishing the dominance of the GBR team.



Volleyball

Brazil aces talent infra mapping

With potential having been spotted early, the tiny town of Saquarema was identified as the hub for nurturing talent in Volleyball. This is where most Brazilian star volleyball players begin their exclusive Volleyball training.

The town houses a dedicated volleyball training centre, Confederação Brasileira de Voleibol (CBV), where Brazilian national volleyball teams eat, sleep, practice, work out and live. Viva Volei, a Grassroots volleyball programme coordinated by the CBV and supported by various institutes such as Rio City Hall, the Sports and Leisure Secretary, National Institute of Sport Development and UNESCO, is designed to protect children from harmful influences and develop the sport across all social strata. More than 100,000 kids benefit annually through this programme.



Weightlifting

China's lifting the bar high

China's strong focus on rural talent and scheme to provide weightlifters yearly stipends has yielded rich rewards. China has invested heavily in infrastructure the Weightlifting Training Centre has 50 training stations. The focus has been on a scientific approach to training.

A product of this sports school, **Chen Yanging** became the first woman weightlifter to win two Olympic gold medals (2004 and 2008).

'Nott-hing' is impossible for Tara

A former gymnast and soccer player, Tara Nott became the first woman Olympic gold medallist in weightlifting, and the second for Team USA with just five years of weightlifting experience under her belt.



Wrestlin

Going for gold

Kaori Icho is the only woman to have won four consecutive gold medals in an individual event. She was undefeated for 13 years of her career. Contemplating retirement after her second gold medal in 2008, Icho had a brush with men's wrestling which led to a complete transformation in her techniques, tactics, nutrition and physical conditioning.

After that, Icho not only trained but also studied men's wrestling in depth and came up with her own style of attacking which gave her a competitive edge in her wrestling journey.

The first samurai

The women's wrestling programme at Shigakkan University (formerly Chukyo Women's University) is regarded as the driving force behind Japan's success in women's wrestling. Japanese women wrestlers have won 11 out of 18 possible gold medals. At Rio 2016, the entire Japanese women's wrestling contingent hailed from this university. Shigakkan University started a women's wrestling club in the late 1980s, decades before it was introduced in the Olympics. By hiring the best resources to develop talent, research and innovation, Shigakkan University has set a global benchmark in the promotion of women wrestling.

About PwC

At PwC, our purpose is to build trust in society and solve important problems. We are a network of firms in 156 countries with over 295,000 people who are committed to delivering quality in assurance, advisory and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com.

PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity. Please see www.pwc.com/structure for further details.

© 2022 PwC. All rights reserved.

Data Classification: DC0 (Public)

In this document, PwC refers to PricewaterhouseCoopers Private Limited (a limited liability company in India having Corporate Identity Number or CIN: U74140WB1983PTC036093), which is a member firm of PricewaterhouseCoopers International Limited (PwCIL), each member firm of which is a separate legal entity.

This document does not constitute professional advice. The information in this document has been obtained or derived from sources believed by PricewaterhouseCoopers Private Limited (PwCPL) to be reliable but PwCPL does not represent that this information is accurate or complete. Any opinions or estimates contained in this document represent the judgment of PwCPL at this time and are subject to change without notice. Readers of this publication are advised to seek their own professional advice before taking any course of action or decision, for which they are entirely responsible, based on the contents of this publication. PwCPL neither accepts or assumes any responsibility or liability to any reader of this publication in respect of the information contained within it or for any decisions readers may take or decide not to or fail to take.

© 2022 PricewaterhouseCoopers Private Limited. All rights reserved.



www.pwc.in

For further discussions on the sports ecosystem in India, please contact:

Shivanshu Chauhan

Partner and Leader – Sports Advisory PwC India shivanshu.chauhan@pwc.com +91 98201 34239