



## BACKGROUND PAPER

# The Physical Activity Economy in Asia: Market Size, Participation, Barriers, and Options to Increase Movement

Ophelia Yeung and Katherine Johnston

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# **THE PHYSICAL ACTIVITY ECONOMY IN ASIA: MARKET SIZE, PARTICIPATION, BARRIERS, AND OPTIONS TO INCREASE MOVEMENT**

White Paper for the Asian Development Bank

Ophelia Yeung and Katherine Johnston

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## Authors

Ophelia Yeung and Katherine Johnston, Senior Research Fellows at the Global Wellness Institute, prepared this white paper. Together, they have four decades of experience in leading research and strategy development for businesses, universities, research institutions, and multilateral and government organizations. Since 2008, Ms. Yeung and Ms. Johnston have pioneered research on the global wellness economy for the Global Wellness Summit and the Global Wellness Institute, including crafting conceptual frameworks and definitions, as well as estimating the size of various wellness sectors.

# Contents

I.	The Rise of Physical Inactivity in Asia .....	1
II.	The Physical Activity Economy in Asia.....	6
III.	Overcoming Barriers to Physical Activity .....	24
IV.	Key Takeaways.....	32

## Appendix:

Physical Activity Economy Sector Definitions .....	34
GWJ Regional Grouping of Countries.....	38
References .....	40

# I. The Rise of Physical Inactivity in Asia

## Physical inactivity: A rising global crisis

Physical activity is intrinsic to wellness. As advocated by physicians and public health authorities around the world, a regular and adequate level of physical activity is vital to our health in all aspects: muscular and cardiorespiratory fitness; bone and functional health; energy, balance, and weight control; and lowering the risks of depression and many chronic diseases (hypertension, coronary heart disease, stroke, diabetes, and various types of cancer). Yet, in recent decades, there has been an alarming trend of declining physical activity in countries around the world.<sup>1</sup> Recent data indicate that as many as 27.5%<sup>2</sup>–31%<sup>3</sup> of adults may be physically inactive. Across countries, including in Asia, low or declining physical activity levels tend to be associated with high or rising national income levels. Research also shows that women and girls tend to be more inactive than men and boys.<sup>4</sup>

These trends are occurring at a time when we need physical activity more than ever to mitigate the rise of chronic disease and the impacts of population aging. *The Lancet* has described the rise of physical inactivity as “pandemic, with far-reaching health, economic, environmental, and social consequences.”<sup>5</sup> Obesity, which is linked with physical inactivity, has nearly tripled worldwide since 1975; 39% of adults are now overweight.<sup>6</sup> Physical inactivity and obesity are key lifestyle risk factors that directly contribute to the rise of chronic or noncommunicable diseases (including heart disease, stroke, cancer, diabetes, and chronic lung disease), which are collectively responsible for 71% of deaths worldwide every year.<sup>7</sup> Physical inactivity is the fourth leading cause of death in the world, responsible for more than 5 million preventable deaths annually.<sup>8</sup> The global economic burden of physical inactivity was estimated at INT\$67.5 billion in 2013 (\$53.8 billion in direct health care costs and \$13.7 billion in productivity losses).<sup>9</sup>

This white paper examines the economy of physical activity in Asia (including its three main segments: sports and active recreation, fitness, and mindful movement); the rates of participation in recreational

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<sup>1</sup> S.W. Ng and B.M. Popkin. 2012. Time use and physical activity: a shift away from movement across the globe. *Obesity Reviews*, 13(8), 659–680. <https://doi.org/10.1111/j.1467-789X.2011.00982.x>.

<sup>2</sup> R. Guthold et al. 2018. Worldwide trends in insufficient physical activity from 2001 to 2016: a pooled analysis of 358 population-based surveys with 1.9 million participants. *The Lancet Global Health*, 6(10), e1077–1086. [https://doi.org/10.1016/S2214-109X\(18\)30357-7](https://doi.org/10.1016/S2214-109X(18)30357-7).

<sup>3</sup> P.C. Hallal et al. 2012. Global physical activity levels: surveillance progress, pitfalls, and prospects. *The Lancet*, 380(9838), 247–257. [https://doi.org/10.1016/S0140-6736\(12\)60646-1](https://doi.org/10.1016/S0140-6736(12)60646-1).

<sup>4</sup> R. Guthold et al (2018); P.C. Hallal et al (2012); and World Health Organization (WHO). 2014. *Global Status Report on Noncommunicable Diseases*. <https://www.who.int/nmh/publications/ncd-status-report-2014/en/>.

<sup>5</sup> H.W. Kohl et al. 2012. The pandemic of physical inactivity: global action for public health. *The Lancet*, 380(9838), 294–305. [https://doi.org/10.1016/S0140-6736\(12\)60898-8](https://doi.org/10.1016/S0140-6736(12)60898-8).

<sup>6</sup> WHO. 2018. *Obesity and Overweight Fact Sheet*. <http://www.who.int/mediacentre/factsheets/fs311/en/>.

<sup>7</sup> WHO. 2018. *Fact Sheet: Noncommunicable diseases*. <http://www.who.int/en/news-room/fact-sheets/detail/noncommunicable-diseases>.

<sup>8</sup> H.W. Kohl et al (2012).

<sup>9</sup> INT=International Dollars, which means that the values in each country are converted to dollars at a purchasing power parity rate that accounts for differentials in the prices of goods and services across countries (<https://datahelpdesk.worldbank.org/knowledgebase/articles/114944-what-is-an-international-dollar>). D. Ding et al. 2016. The economic burden of physical inactivity: a global analysis of major non-communicable diseases. *The Lancet*, 388(10051), 1311–1324. [https://doi.org/10.1016/S0140-6736\(16\)30383-X](https://doi.org/10.1016/S0140-6736(16)30383-X).

physical activities across Asian countries; and industry size and trends, using recent data on the global physical activity sector developed by the authors for the Global Wellness Institute (GWI). It also examines the main barriers to physical activity participation, and it highlights options that can encourage and support all populations to be more physically active, including the elderly, youth, and marginalized groups.

## What is physical activity?

The World Health Organization (WHO) defines physical activity as “any bodily movement produced by skeletal muscles that requires energy expenditure – including activities undertaken while working, playing, carrying out household chores, travelling, and engaging in recreational pursuit.” According to the WHO, in order to maintain good health, children and adolescents need 60 minutes of moderate-to vigorous-intensity physical activity daily, and adults need 150 minutes of moderate-intensity physical activity, or 75 minutes of vigorous-intensity physical activity, on a weekly basis.<sup>10</sup> The benefits of physical activity are varied, widely proven, and well-known, including preventing chronic disease, reducing stress, managing weight, strengthening functional mobility, improving sleep, alleviating depression, and improving cognitive function. To receive these benefits, our engagement in physical activity needs to be regular, consistent, and sustained—not intermittent, only during holidays, or only when we want to lose weight or can find the time.

Physical activities can be broadly divided into natural movement and recreational physical activity.

- Natural movement encompasses the physical activities that are essential to our daily lives, including transportation (e.g., walking and cycling as transportation); occupational (e.g., work that requires manual labor); or domestic movement (e.g., household chores and gardening). These kinds of activities have been the core of physical activity for humankind for millennia. Unfortunately, as discussed below, natural movement is now on the decline around the world, progressively discouraged by our modern lifestyles and built environments.
- We also engage in optional and intentional movement as part of our hobbies and leisure time. Recreational physical activity can include going to the gym, playing sports, taking a walk or cycling for fun, dancing, and children playing on a playground. As natural movement declines, recreational physical activity is becoming essential for a growing number of people in order to stay healthy.

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<sup>10</sup> World Health Organization (WHO). 2018. Physical Activity: Key Facts. *WHO Fact Sheet*. <https://www.who.int/news-room/fact-sheets/detail/physical-activity>.

## The current state of physical inactivity in Asia

The most recent country-level data on physical activity (compiled by *The Lancet*) show that about 27.5% of the world's adult population has insufficient levels of physical activity (i.e., not meeting the WHO standards described above).<sup>11</sup> As shown in Table 1, physical inactivity varies widely across Asia.

- In general, inactivity is higher than the global average in high-income Asian countries and South Asia, but lower than the global average in East Asia, Southeast Asia and Oceania. The disparities in inactivity rates between men and women are generally less stark in East Asia and Southeast Asia than in other regions across Asia.
- Countries with the largest inactive populations include the Philippines, Malaysia, Singapore, Japan, the Republic of Korea (ROK), India, and Pakistan, as well as a number of Pacific nations (American Samoa, Marshall Islands, Nauru, Palau, Kiribati, and Micronesia).
- Countries with the lowest levels of inactivity in Asia include Cambodia, Myanmar, Nepal, the People's Republic of China (PRC), and many Pacific nations (Niue, Vanuatu, Tokelau, Samoa, and Papua New Guinea).
- Countries with the least amount of disparity in inactivity rates between men and women include the PRC, Indonesia, Niue, Cambodia, Vanuatu, Nepal, Japan, and Singapore. Conversely, in many countries across the region, women are far more inactive than men, including Palau, Bangladesh, Tuvalu, India, the Philippines, Pakistan, the Cook Islands, Tonga, Sri Lanka, and Timor-Leste.

**Table 1: Prevalence of Insufficient Physical Activity in Asia and the Pacific, 2016**

	Overall % of Population With Insufficient Physical Activity	% of Men	% of Women
<b>High-Income Asia and the Pacific</b>	<b>35.7</b>	<b>33.0</b>	<b>38.3</b>
Japan	35.5	33.8	37.0
Singapore	36.5	34.3	38.6
Republic of Korea	35.4	29.5	41.0
<b>East and Southeast Asia</b>	<b>17.3</b>	<b>17.6</b>	<b>16.9</b>
Brunei Darussalam	27.3	21.2	33.9
Cambodia	10.5	9.8	11.1
People's Republic of China	14.1	16.0	12.2
Indonesia	22.6	23.5	21.7
Lao People's Democratic Republic	16.3	11.7	20.6
Malaysia	38.8	34.6	42.8
Maldives	30.3	25.8	34.8
Myanmar	10.7	8.1	13.1
Philippines	39.7	30.1	49.1
Sri Lanka	28.9	20.2	36.7
Thailand	24.6	21.8	27.2
Timor-Leste	17.8	10.3	25.5

<sup>11</sup> R. Guthold et al (2018).

	Overall % of Population With Insufficient Physical Activity	% of Men	% of Women
Viet Nam	25.4	19.9	30.6
<b>South Asia</b>	<b>33.0</b>	<b>23.5</b>	<b>43.0</b>
Bangladesh	27.8	16.1	39.5
Bhutan	23.0	17.7	29.5
India	34.0	24.7	43.9
Nepal	13.4	12.0	14.6
Pakistan	33.7	24.4	43.3
<b>Oceania</b>	<b>16.3</b>	<b>12.3</b>	<b>20.3</b>
American Samoa	53.4	49.3	57.5
Cook Islands	18.5	9.8	27.2
Fiji	17.4	10.8	24.1
French Polynesia	17.9	13.5	22.5
Kiribati	40.4	34.5	45.8
Marshall Islands	43.5	37.0	50.0
Micronesia	36.6	32.9	40.5
Nauru	42.1	34.9	49.4
Niue	6.9	7.8	6.0
Palau	40.9	28.3	53.5
Papua New Guinea	14.8	11.4	18.2
Samoa	12.6	8.2	17.2
Solomon Islands	18.2	13.3	23.2
Tokelau	11.1	4.5	17.7
Tonga	17.4	8.5	25.9
Tuvalu	27.3	17.5	37.2
Vanuatu	8.0	7.20	8.8

Source: R. Guthold et al. 2018. Worldwide trends in insufficient physical activity from 2001 to 2016: a pooled analysis of 358 population-based surveys with 1.9 million participants – Supplementary Appendix. *The Lancet Global Health*, 6(10). [https://doi.org/10.1016/S2214-109X\(18\)30357-7](https://doi.org/10.1016/S2214-109X(18)30357-7). This study pooled data from 358 population-based surveys across 168 countries, including 1.9 million participants.

## Why is physical inactivity rising?

There is no question that our modern lifestyles and livelihoods require much less physical exertion than those of previous generations of farmers, fisherman, herders, tradesmen, and industrial workers. In all aspects, daily lives have become more sedentary. Across Asia, urbanization, technological developments, and growing service economies have drawn more people into sedentary jobs. For the growing middle class and for people who live in middle-income and high-income countries, household chores such as cooking and cleaning have been greatly eased by modern appliances and industrialized food production. Meanwhile, the digital revolution has enabled us to shop, socialize, and consume news and entertainment without leaving our homes or even our sofas.

The trend is equally alarming for the youth. Studies have found a long-term decline in cardiovascular fitness levels among children and adolescents, especially in upper-income and middle-income



countries.<sup>12</sup> In many countries, fewer children are walking or biking to school.<sup>13</sup> Across cities and suburbs, the spontaneous and unsupervised outdoor play of past generations has been replaced with scheduled playdates, structured lessons, and sports leagues—activities to which children are often transported by vehicles. Similar to adults, teens now have less motivation to be active when they are glued to their mobile devices for social media, gaming, and entertainment.

As essential physical tasks steadily disappear in our daily lives, they have not been replaced by other types of built-in movement. Our modern built environment—both urban and suburban—is often described as obesogenic, with many factors interacting and conspiring against a physically active lifestyle.

- The design of modern neighborhoods and buildings often prioritizes the speed and convenience of vehicular traffic, with the unintended result of making walking or cycling an unpleasant, inconvenient, or even dangerous way to travel.
- Density, overcrowding, and sprawling are becoming the way of life for people who live in the largest and rapidly growing metropolises. Lack of sidewalks or crosswalks, wide lanes, heavy traffic, and auto-centric planning have made walking or biking less viable as a transportation option across many cities.
- Many people do not have adequate access to parks, green space, or sports and recreational facilities near their homes. Some people live in areas where crime and safety concerns discourage them from being outdoors. Some stay indoors because of poor air quality and pollution.
- Similarly, most modern buildings have been designed for efficiency and comfort, rather than to encourage movement; for example, placing elevators prominently in lobbies, while hiding narrow and dark stairways.

All those missed opportunities to move in our daily lives, such as short distances not walked and flights of stairs eschewed, have now become the “steps” that we need to make up each day to meet our daily requirements for physical activity. Not surprisingly, in just a generation or two, physical activity has become less natural and more structured and intentional. To stay active, many people now have to schedule time to exercise. Increasingly, people also have to spend money for the opportunity to exercise. This is giving rise to the physical activity economy.

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<sup>12</sup> G.R. Tomkinson, J.J. Lang, and M.S. Tremblay. 2019. Temporal trends in the cardiorespiratory fitness of children and adolescents representing 19 high-income and upper middle-income countries between 1981 and 2014. *British Journal of Sports Medicine*, 53(8), 478–486. <https://doi.org/10.1136/bjsports-2017-097982>; G.R. Tomkinson et al. 2012. Temporal changes in long-distance running performance of Asian children between 1964 and 2009. *Sports Medicine*, 42(4), 267–279. <https://doi.org/10.2165/11599160-000000000-00000>; and D.J. Macfarlane and G.R. Tomkinson. 2007. Evolution and variability in fitness test performance of Asian children and adolescents. *Medicine & Sport Science*, 50, 143–167. <https://doi.org/10.1159/000101358>.

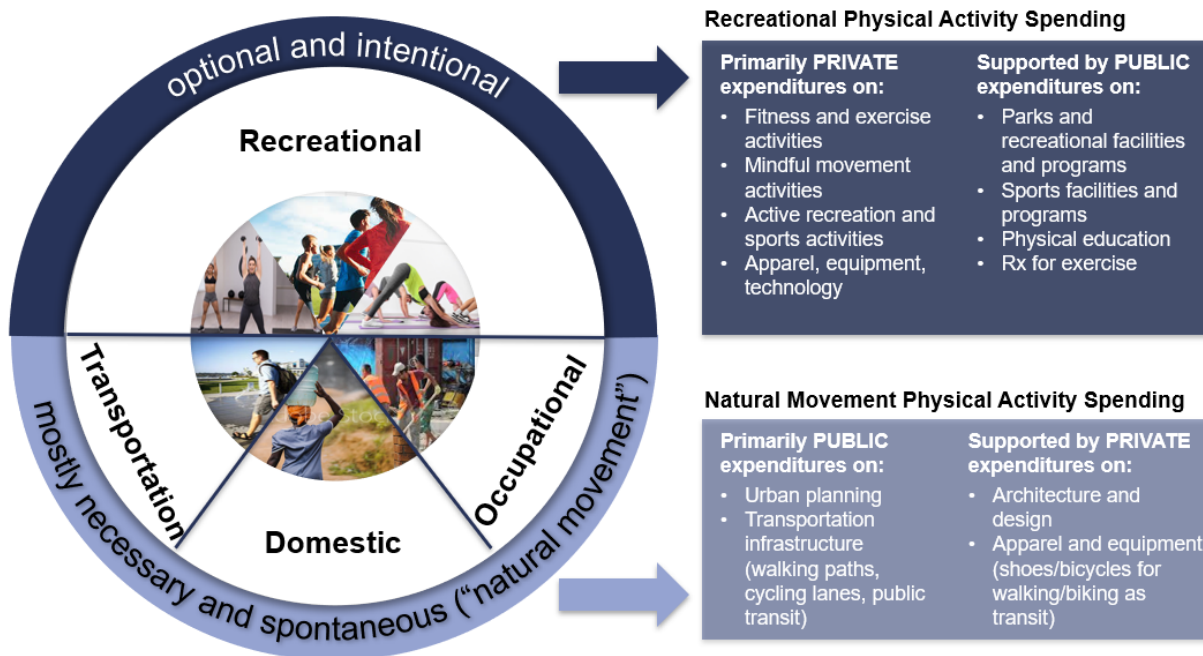
<sup>13</sup> R. Uddin et al. 2019. Active commuting to and from school among 106,605 adolescents in 27 Asia-Pacific countries. *Journal of Transport & Health*, 15. <https://doi.org/10.1016/j.jth.2019.100637>; and W. Lu et al. 2014. Perceived barriers to children's active commuting to school: a systematic review of empirical, methodological and theoretical evidence. *International Journal of Behavioral Nutrition & Physical Activity*, 11(140). <https://doi.org/10.1186/s12966-014-0140-x>.

## II. The Physical Activity Economy in Asia

### What is the physical activity economy?

Physical activity generates significant economic activities, both around the world and in Asia. As leisure-time fitness, exercise, and active recreation become more popular, these pursuits represent an important private household spending line item. Government spending also plays a substantial role in supporting physical activity.

**Figure 1: Private and Public Expenditures on Physical Activity**



Source: Global Wellness Institute.

- **Private expenditures** are primarily on intentional recreational physical activities, which individuals and families increasingly choose to do during their leisure time. These expenditures include the fees to join a gym or Young Men's Christian Association (YMCA), attend a fitness class or yoga class, join a recreational sports team or club, swim laps at a pool, and run a marathon. Individuals also spend money on clothing, shoes, equipment, sporting goods, and technology devices/services that support their participation in recreational physical activities (and which might also support walking/biking as transit, or natural movement physical activity).
- **Public expenditures** support both natural movement and recreational physical activities, primarily in the form of infrastructure investments and youth/education spending, and often at the municipal/city level of government. In most countries, governments support recreational physical activities and sports in a variety of ways, including building and maintaining public sports fields, swimming pools, tennis courts, and running paths and trails,

as well as providing funding for youth and community sports leagues and training programs. A smaller number of governments build and/or subsidize community fitness centers and gyms. Governments fund physical education classes in schools, which provide children with early exposure to a variety of sports and physical activities and help instill lifelong healthy habits. Public expenditures are also critical for facilitating natural movement physical activity, especially via urban planning and public transit investments that create the infrastructure for people to walk and ride bicycles as part of their commute or daily activities.

In 2019, the authors estimated the size of the global physical activity market, focusing on the private spending on recreational physical activity.<sup>14</sup> In our study, we defined the global physical activity market as consumer spending associated with intentional physical activities performed during leisure and recreation. The core of the market is the services that allow consumers to participate in three categories of recreational physical activities: fitness, sports and active recreation, and mindful movement. The market also includes three supporting sectors that enable and facilitate consumer participation in these activities: technology, equipment and supplies, and apparel and footwear. The Appendix includes the definitions of each of these subsectors.

While public expenditures are an important component of the physical activity economy (as elaborated above), they are not estimated as part of the data presented in this white paper. There is not sufficient data to make a credible estimate of government expenditures in this sector because this spending occurs at multiple levels of government (local, regional, and national) and across multiple agencies and budgetary items (such as transportation and infrastructure, parks and recreation, and sports). The focus of the authors' data-gathering is on private spending, which is the best gauge for the rising consumer interest in intentional recreational physical activities and related services. Public spending, public initiatives, and public policies that support physical activities are addressed qualitatively in section III.

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<sup>14</sup> Global Wellness Institute. 2019. *Move to be Well: The Global Economy of Physical Activity*. <https://globalwellnessinstitute.org/industry-research/global-economy-physical-activity/>.

### Box: Different Ways of Measuring Physical Activity

The physical activity participation and market size data developed by the authors and presented in this section are not the same as the “physical inactivity” statistics presented in section I.

Section I presents global and country-level physical inactivity statistics compiled by *The Lancet*. These figures measure physical activity/inactivity, defined as the share of the population that is/is not meeting the World Health Organization (WHO) recommendations to maintain good health (e.g., adults need 150 minutes of moderate-intensity physical activity, or 75 minutes of vigorous-intensity physical activity, on a weekly basis). In this definition, WHO guidelines may be met by any type of physical activity, whether from recreational activities or natural movement (occupational, transport, or domestic). *The Lancet* dataset draws upon studies and surveys developed by researchers and public health experts across countries, such as the WHO STEPwise approach to surveillance (STEPS).<sup>a</sup>

Section II presents the data developed by the authors that measure the share of the population participating in recreational physical activities. Here, participation is defined as doing any kind of recreational physical activity at least once a month or with some regularity. These data do not measure the intensity of recreational physical activities or whether they are sufficient to meet WHO physical activity guidelines. In fact, the minimum threshold used to define “participation” in the authors’ dataset (at least once a month) is certainly not sufficient to meet WHO guidelines or stay healthy. In addition, the focus is solely on participation in recreational physical activities and not on other types of physical activity via natural movement (occupational, transport, and domestic).

With this dataset, the authors aim to capture the share of each country’s population that is part of the discretionary consumer marketplace for various types of recreational physical activities. Based on participation rates, the authors then estimate the direct, out-of-pocket expenditures made by consumers each year in order to participate in various types of recreational physical activities. In some instances, fees for participation may be subsidized (e.g., in fitness facilities run by governments), and in these instances the authors still count consumer participation in the activity although out-of-pocket expenditures would be reduced or possibly zero. Likewise, for some activities there is no service provider or participation fee (e.g., running in the park or playing a pickup basketball game with friends), and in these instances the authors count consumer participation in the activity although the expenditures are zero.

<sup>a</sup> WHO. No date. *STEPwise approach to Surveillance (STEPS)*. <http://www.who.int/ncds/surveillance/steps/en/>; and L. Riley et al. 2016. The World Health Organization STEPwise Approach to Noncommunicable Disease Risk-Factor Surveillance: Methods, Challenges, and Opportunities. *American Journal of Public Health*, 106(1), 74–78. <https://doi.org/10.2105/AJPH.2015.302962>.

Source: The Authors.

## Asia's physical activity economy in 2018

Asia has one of the largest and most diverse physical activity markets in the world, valued at \$240.4 billion in 2018.

Valued at \$240.4 billion in 2018, the physical activity market in Asia and the Pacific is large, diverse, and dynamic. It accounts for 29% of the total global economy for physical activity (\$828.2 billion). Asia and the Pacific is the second largest regional market in the world for physical activity, after North America. Within the Asian physical activity market, \$116.6 billion (48%) represents direct consumer expenditures on participating in a variety of recreational physical activities; primarily, sports and active recreation, as well as fitness and mindful movement. The remaining 52%, or \$125.5 billion, represents expenditures on a variety of enabling and supporting sectors; primarily, clothing and footwear, along with fitness equipment, sporting goods, and related supplies, and fitness- and exercise-related technologies.

**Figure 2: Physical Activity Economy by Region, 2018**



Physical activity spending averages about \$176 per participant per year in Asia and the Pacific, divided into \$85 spent on participating in recreational physical activities and \$92 spent on associated apparel, footwear, equipment, sporting goods, and technology devices and services. Per participant expenditures in Asia are quite a bit lower than the global average (\$176 in Asia versus \$306 globally). In Asia's most developed countries, and in its largest metropolitan areas, middle-class and upper-class consumers have access to a well-developed industry of fitness and sporting facilities (e.g., gyms and

health clubs, yoga studios, sporting clubs, swimming pools, and dance studios). In these places, participant spending levels are higher, not only because average incomes are higher, but also because there is a wider variety of fitness and recreational physical activities that people can pay for. However, for the majority of people living in Asia, the market and infrastructure for fitness and sports are simply not well-developed. In these places, people who engage in recreational physical activities do so with little to no spending; for example, playing soccer in a local league or with friends, going for a run outside, or doing tai chi in a park. For this reason, average spending per participant can vary widely across Asia, such as \$622 in the ROK, \$495 in Japan, and \$460 in Singapore, compared with \$66 in India, \$55 in the Philippines, and \$29 in Indonesia and Viet Nam.

**Table 2: Physical Activity Economy in Asia and the Pacific, 2018**

	<b>Market Size<sup>a</sup></b> Participation Rate <sup>a</sup> / (US\$ billions)		<b>Average Spending per Participant</b>
<b>Recreational Physical Activities</b>	<b>33.2%</b>	<b>\$116.6</b>	<b>\$85</b>
Sports and active recreation	30.4%	\$83.0	\$66
Fitness	1.1%	\$22.7	\$494
Mindful movement	4.5%	\$10.9	\$58
<b>Enabling Sectors</b>	<b>\$125.5</b>		<b>\$92</b>
Apparel and footwear	\$87.5		\$8
Equipment and supplies	\$27.6		\$20
Technology	\$10.8		\$64
<b>Total Physical Activity Economy in Asia and the Pacific</b>	<b>\$240.4</b>		<b>\$176</b>

<sup>a</sup> Market size measures consumer expenditures on classes, memberships, entry fees, trainers, and related services and methods of participation. Participation rate measures the share of the total population who participate in one or more of the three physical activity categories on a regular basis (at least monthly).

Note: Numbers may not sum precisely because of overlap between segments and rounding.

Source: Global Wellness Institute.

Not surprisingly, the region is led by the PRC and Japan, which also rank second and third globally (after the United States) for the overall size of their physical activity markets. The top three markets in Asia (the PRC, Japan, and the ROK) account for nearly three-quarters of all physical activity spending in the region. It is interesting that, among many (but not all) of Asia's largest markets, spending on enabling sectors is larger than spending on recreational physical activity participation, especially in India, Thailand, Pakistan, Bangladesh, Sri Lanka, Myanmar, and Cambodia. However, in some markets, the opposite is the case (e.g., the ROK, Australia, New Zealand, and Singapore). These differentials are largely driven by how much people spend on apparel and shoes across these countries.

**Table 3: Top Twenty Physical Activity Markets in Asia and the Pacific by Market Size, 2018**

	Recreational Physical Activities		Enabling Sectors (US\$ billion)	Total Physical Activity Market (US\$ billion)	Rank in 2018
	Participation Rate <sup>a</sup>	Market Size <sup>a</sup> (US\$ billion)			
People's Republic of China	48.6%	\$53.56	\$56.89	\$109.35	1
Japan	69.6%	\$20.79	\$23.16	\$43.89	2
Republic of Korea	73.7%	\$14.25	\$9.32	\$23.46	3
Australia	84.1%	\$11.45	\$5.37	\$16.73	4
India	15.0%	\$3.51	\$10.02	\$13.39	5
Taipei, China	84.0%	\$3.69	\$4.08	\$7.73	6
Hong Kong, China	58.2%	\$1.40	\$2.72	\$4.11	7
New Zealand	83.8%	\$1.72	\$1.32	\$3.03	8
Thailand	27.8%	\$0.74	\$2.16	\$2.89	9
Indonesia	34.2%	\$1.30	\$1.34	\$2.61	10
Malaysia	41.1%	\$0.75	\$1.29	\$2.04	11
Pakistan	13.2%	\$0.28	\$1.68	\$1.95	12
Philippines	32.7%	\$0.68	\$1.23	\$1.90	13
Bangladesh	25.2%	\$0.22	\$1.58	\$1.79	14
Singapore	64.9%	\$1.08	\$0.67	\$1.73	15
Viet Nam	35.7%	\$0.47	\$0.54	\$1.00	16
Sri Lanka	19.2%	\$0.16	\$0.44	\$0.60	17
Macau, China	51.1%	\$0.16	\$0.32	\$0.47	18
Myanmar	21.3%	\$0.07	\$0.40	\$0.47	19
Cambodia	21.4%	\$0.06	\$0.15	\$0.21	20

a Participation rate measures the share of the total population who participate in one or more of the three physical activity categories on a regular basis (at least monthly). Market size measures consumer expenditures on classes, memberships, entry fees, trainers, and related services and methods of participation.

Note: Numbers may not sum precisely because of overlap between segments and rounding.

Source: Global Wellness Institute estimates, based on data from Euromonitor International, Statista, and many other sources.

Buoyed by economic growth, the rising purchasing power of the middle class, and a growing interest in healthy and active lifestyles, Asia's physical activity economy is growing fast and is increasingly competitive. The authors project that Asia will be the fastest-growing region for physical activity spending in the next 5 years—posting an average annual growth rate of 9.2% (compared with 6.6% growth projected globally)—and will overtake North America as the largest region by expenditures in 2023. Over 40% of the global increase in the physical activity market will be in the Asia and the Pacific region; the PRC and India together are projected to account for nearly one-third of the market growth. Consumers in Asia's higher-income countries and major metropolises keenly follow the latest fitness and recreational trends and offerings, while the region's vibrant private sector innovates, imports, improvises, and adapts to meet rising demand. Across the region, rising concern about obesity and



chronic disease and the awareness of their link to inactivity will continue to push governments, nonprofits, medical systems, employers, and consumers to pay more attention to physical activity.

### Higher spending on physical activity does not necessarily correspond to a higher level of participation, which is currently at 33% across Asia.

The percentage of the population participating in recreational physical activities in Asia is estimated at 33.2%, which is just below the global average of 35.5%. A high level of *spending* on recreational physical activities does not always equate to a higher level of participation in these activities (and vice versa). For example, as a region, the Asia and Pacific region has a lower participation rate than Latin America and the Caribbean, although its per participant spending is quite a bit higher. Similarly, the Asia and Pacific region's participation rate is just slightly higher than that of Sub-Saharan Africa, even though its per participant spending is more than seven times higher.

**Figure 3: Recreational Physical Activity Participation Rates and Average Spending Per Participant, by Region, 2018**



Across Asia, recreational physical activity participation varies widely, from a high of 84% in Australia and Taipei, China to a low of 13%–15% in India and Pakistan. Importantly, many people in Asia conduct their leisure time physical activity in public places with little or no spending. In the lower-income countries, people participate in sports and other recreational activities in a variety of public and free venues (e.g., in public parks and plazas; in free sporting facilities, such as neighborhood basketball courts or ball fields, in vacant lots, in the streets; and at home). Their out-of-pocket spending is lower



(or zero) because private fitness and recreation businesses, facilities, and infrastructure are less developed. For example, no-cost individual and group exercises in public outdoor gyms, plaza dancing, and tai chi in parks are very popular in the PRC, especially among seniors. “Plaza dancing” (*guangchang wu*) has become a major exercise phenomenon, practiced by an estimated 100 million Chinese women (and some men) – who are mostly middle-aged and seniors – in public squares, parks, parking lots, and other public venues.

Even in higher-income markets, many people pay nothing to participate in sports and other recreational physical activities. For example, national survey data show that 67% of adult participants in Japan,<sup>15</sup> 25% in the ROK,<sup>16</sup> and 41% in Australia<sup>17</sup> spend no money on participating in these activities, and yet participation rates across all three nations are quite high. In addition to their well-developed private sector fitness markets, the governments in all three of these countries have invested in widespread publicly subsidized fitness and sports facilities and infrastructure, which allow their populations to participate with very low out-of-pocket expenditures.

**Table 4: Recreational Physical Activity Participation Rates in Asia and the Pacific, 2018**

	Participation Rate <sup>a</sup>	Rank		Participation Rate <sup>a</sup>	Rank
Australia	84.1%	1	Viet Nam	35.7%	14
Taipei, China	84.0%	2	Indonesia	34.2%	15
New Zealand	83.8%	3	Philippines	32.7%	16
Mongolia	75.0%	4	Thailand	27.8%	17
Republic of Korea	73.7%	5	Timor-Leste	26.3%	18
Japan	69.6%	6	Bangladesh	25.2%	19
Singapore	64.9%	7	Cambodia	21.4%	20
Hong Kong, China	58.2%	8	Myanmar	21.3%	21
Macau	51.1%	9	Nepal	20.0%	22
People’s Republic of China	48.6%	10	Sri Lanka	19.2%	23
Papua New Guinea	46.4%	11	India	15.0%	24
Malaysia	41.1%	12	Pakistan	13.2%	25
Lao People’s Democratic Republic	39.8%	13			

<sup>a</sup> Participation rate measures the share of the total population who participate in one or more of the three physical activity categories on a regular basis (at least monthly).

Source: Global Wellness Institute.

<sup>15</sup> Japan Sports Agency. 2017. スポーツの実施状況等に関する世論調査 (*Public Opinion Survey on the Implementation Status of Sport*).

[http://www.mext.go.jp/prev\\_sports/comp/b\\_menu/other/\\_icsFiles/afieldfile/2018/03/30/142346\\_77\\_1.pdf](http://www.mext.go.jp/prev_sports/comp/b_menu/other/_icsFiles/afieldfile/2018/03/30/142346_77_1.pdf).

<sup>16</sup> Ministry of Culture, Sports, and Tourism, Republic of Korea. 2017. 국민 생활체육 참여 실태 조사 (*National Sports Participation Survey 2017*).

[https://www.sports.re.kr/front/board/boardFileUseDown.do?board\\_seq=74&con\\_seq=2848&file\\_seq=1606](https://www.sports.re.kr/front/board/boardFileUseDown.do?board_seq=74&con_seq=2848&file_seq=1606).

<sup>17</sup> Australian Sports Commission Clearinghouse for Sport and Physical Activity. *AusPlay National Data Tables – July 2018 to June 2019 data*. <https://www.clearinghouseforsport.gov.au/research/smi/ausplay/results/national>.

Recognizing the growing public health crisis associated with inadequate levels of physical activity, a number of governments across Asia have committed to increasing participation rates through greater public investment in exercise and sports facilities and infrastructure.

- Japan's high participation rates are supported by government investment in affordable public facilities. Public and community facilities account for half of the nation's gyms. There are at least 5,000 public gyms across the country, and these are supplemented with facilities in schools and universities that are accessible to the public, which mean that nearly every city in Japan has access to public/community fitness clubs that offer basic and affordable workout equipment and services (typically costing less than US\$4 per visit). Most small parks and gardens have some outdoor fitness apparatus, and sports and recreational facilities are ample in larger parks (e.g., tennis and basketball courts, and playgrounds).
- Singapore's high participation rate is also buoyed by extensive government investment in exercise, sports, and recreational facilities and infrastructure that are affordable and accessible for the entire population. Sport Singapore's ActiveSG initiative manages over 180 community gyms and recreational centers with classes and programs for all ages, 27 swimming complexes, and dozens of sporting fields, and there are also over 1,200 free outdoor gyms throughout the city. ActiveSG and the Singapore Health Promotion Board (HPB) run a number of national challenges and events to encourage residents to walk and get more exercise, and some of these offer cash incentives and prizes (as well as free fitness trackers).<sup>18</sup> In 2019, the HPB announced a new "comprehensive digital health platform" based on the use of wearables (in partnership with FitBit), as part of its national "Live Healthy SG" initiative to encourage physical activity, healthy eating, and better sleep. (More details are in section III.)<sup>19</sup>
- In the ROK; Hong Kong, China; and Taipei, China, outdoor recreational activities such as running, walking, and hiking, and exercising in parks and squares are popular, and these activities rely on ongoing investments in public infrastructure. Facing similar demographic trends of rapidly aging populations, governments are putting increased attention on engaging and serving an aging population, partly to mitigate concern over rising health care costs. For example, in Taipei, China, the government has built a large-scale sports and recreational center in each of Taipei City's 12 districts since 2003. Exercise for Health was launched in the city of New Taipei in 2016; the project dispatches instructors to community centers in each of the city's 29 districts, targeting seniors and residents with reduced mobility who may not be able to access the existing civic sports complexes. As part of the program, the city government signed a 2-year cooperation agreement with Exercise is Medicine (EIM), an initiative launched by the American Medical Association and the American College of Sports Medicine in 2007 to integrate physical activity into medical treatment plans.<sup>20</sup>

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<sup>18</sup> GetActive! Singapore. 2019. <https://events.myactivesg.com/getactive2019>; National University of Singapore Bicentennial Challenge. <https://www.myactivesg.com/whats-on/event/2019/9/nus-sg-bicentennial-challenge>; and National Steps Challenge. <https://www.healthhub.sg/programmes/37/NSC>.

<sup>19</sup> J. Somauroo. 2019. Fitbit Partners With Singapore Government To Offer Trackers To 5.6 Million People. *Forbes*. <https://www.forbes.com/sites/jamessomauroo/2019/08/22/fitbit-partners-with-singapore-government-to-offer-trackers-to-56m-people/#176c8d7a2031>; and K. Kwang. 2019. HPB partners Fitbit to encourage Singaporeans to adopt healthier habits. *Channel News Asia*. <https://www.channelnewsasia.com/news/singapore/hpb-fitbit-encourage-singaporeans-adopt-healthier-habits-11828980>.

<sup>20</sup> Fitness groups engineer exercise attitude adjustment in Taiwan. *Taiwan News*. 29 March 2019. <https://www.taiwannews.com.tw/en/news/3668878>. (ADB officially recognizes this member as "Taipei, China").

- In the PRC, the government has made significant efforts to raise awareness about the importance of physical activity, and to reduce the disparity of access across regions. In 2016, the PRC announced a National Fitness Plan, which lays out ambitious goals of having 700 million engage in exercise at least once a week, and 435 million exercising regularly. In support of this aim, the government has made substantial investments in public sports and recreational facilities, outdoor gyms, and running paths, as well as in sports programs and promotional campaigns.<sup>21</sup> These efforts have greatly increased the awareness and interest of the Chinese public in physical activity, and they have contributed to rising participation in running, walking, hiking, community sports, and fitness training in the past few years.
- In Southeast Asia, countries such as Indonesia, Malaysia, the Philippines, and Thailand, typically have lower levels of recreational physical activity participation than in East Asia. The urban infrastructure in these countries for an active lifestyle (e.g., public parks, jogging trails, bike paths, and public recreational facilities) is not well-developed. Outside major cities, the infrastructure for recreational physical activity, both public and private facilities, is even more limited. Overall, the vast majority of the population lack access to sports and recreational facilities and has limited knowledge about the importance of exercise. To the extent that physical activity is supported in schools, the emphasis is often on preparing the best athletes for competition rather than encouraging physical activity for all. Several country governments have launched events and media campaigns (e.g., Fit Malaysia)<sup>22</sup> to encourage physical activity, while also making investments to improve public infrastructure and facilities. The Government of the Philippines was especially motivated to improve public awareness of sports and fitness before it hosted the 2019 Southeast Asian Games.
- Across Asia, recreational physical activity participation rates are typically lowest in South Asia. In India, the country lacks physical activity infrastructure, especially outdoor active recreation venues in cities. But this is changing. Since 2016, members of Parliament have used local development funds to install 1,700 open-air gyms in parks throughout New Delhi (at about \$10,000 each), and hundreds more are being planned.<sup>23</sup> In Pakistan, there are also very low levels of participation, limited public awareness about the health benefits of exercise, and an undeveloped infrastructure throughout the country. In both markets, female participation in physical activity, especially in sports and active recreation, has been hampered by cultural and religious beliefs; however, attitudes are changing, especially among the urban and educated elites, and participation of women and girls in recreational physical activity is growing.

<sup>21</sup> S. Wu, Y. Luo, and M. Bao. 2017. Building a healthy China by enhancing physical activity: Priorities, challenges, and strategies. *Journal of Sport and Health Science*, 6(1): 125–126. <https://doi.org/10.1016/j.jshs.2016.10.003>; and International Health, Racquet & Sportsclub Association (IHRSA). 2018. *Asia-Pacific Health Club Report*, second edition. <https://www.ihrsa.org/publications/ihrsa-asia-pacific-health-club-report-second-edition/>.

<sup>22</sup> <https://www.thestar.com.my/news/community/2014/09/05/nationwide-campaign-to-get-fit-movement-aims-to-highlight-benefits-of-active-lifestyle/> and <https://www.thestar.com.my/metro/metro-news/2019/03/27/healthy-turnout-for-fitness-campaign>; and [https://expert.taylors.edu.my/file/remis/publication/100975\\_4483\\_3.pdf](https://expert.taylors.edu.my/file/remis/publication/100975_4483_3.pdf).

<sup>23</sup> M. Manohar and P. Singh. 2018. New Delhi: Open gyms make fitness a mass exercise. *Times of India*. <https://timesofindia.indiatimes.com/city/delhi/open-gyms-make-fitness-a-mass-exercise/articleshow/65507526.cms>; and A. Mishra and R. Chitlangia. 2019. Why open-air gyms topped Delhi MPs' list of development projects. *Hindustan Times*. <https://www.hindustantimes.com/delhi-news/why-open-air-gyms-topped-delhi-mps-list-of-development-projects/story-uVwa3VLjcn8de5flfcROxJ.html>.

There are three subsegments of recreational physical activities: sports and active recreation, fitness, and mindful movement.

Recreational physical activities are the core of the global physical activity market. The authors estimate that Asian consumers spent \$117 billion out-of-pocket on doing these activities in 2018. By far, sports and active recreation is the largest category of expenditures (\$83 billion) and participation (30%) across Asia, followed by fitness (\$22.7 billion) and mindful movement (\$10.9 billion).

**Table 5: Recreational Physical Activities in Asia and the Pacific, 2018**

Recreational Physical Activities	Market Size <sup>a</sup> Participation Rate <sup>a</sup> / (US\$ billion)		Average Spending per Participant
<b>Recreational Physical Activities</b>	<b>33.2%</b>	<b>\$116.6</b>	<b>\$85</b>
Sports and active recreation	30.4%	\$83.0	\$66
Fitness	1.1%	\$22.7	\$494
Mindful movement	4.5%	\$10.9	\$58

<sup>a</sup> Market size measures consumer expenditures on classes, memberships, entry fees, trainers, and related services and methods of participation. Participation rate measures the share of the total population who participate in one or more of the three physical activity categories on a regular basis (at least monthly).

Note: Numbers may not sum precisely because of overlap between segments and rounding.

Source: Global Wellness Institute.

## 1. Sports and Active Recreation

By far, sports and active recreation is the most popular way for people to engage in recreational physical activities (both across Asia and globally). An estimated 30% of Asia's population participates on a regular basis (and 33% of the population globally). Asian consumers spent about \$66 per participant annually on doing sports and active recreation, or \$83.0 billion in 2018 (accounting for 71% of all recreational physical activity spending in the region).

The top markets for sports and active recreation spending are primarily wealthier areas that have high participation rates, combined with higher average spending levels for participants (e.g., Japan; the ROK; Australia; and Taipei,China). Some of the top markets (notably, the PRC, India, and Indonesia) have lower participation rates and lower spending levels, but are still among largest markets because of the sheer size of their populations. Taipei,China ranks highest in the world for its sports and active participation rate (80.7%), and New Zealand, Australia, Mongolia, the ROK, Japan, and Singapore also rank in the global top 20 for participation rates (all between 60% and 79%).

**Table 6: Top Twenty Sports and Active Recreation Markets in Asia and the Pacific by Market Size, 2018**

	Sports and Active Recreation		
	Participation Rate <sup>a</sup>	Market Size <sup>a</sup> (US\$ million)	Average Spending per Participant
People's Republic of China	43.5%	\$42,281.6	\$69
Japan	66.5%	\$13,301.8	\$157
Republic of Korea	70.6%	\$10,940.5	\$303
Australia	77.4%	\$6,709.1	\$350
Taipei, China	80.7%	\$2,792.8	\$146
India	12.9%	\$1,773.8	\$10
New Zealand	79.1%	\$1,134.0	\$302
Hong Kong, China	54.0%	\$787.3	\$196
Indonesia	33.7%	\$685.6	\$8
Singapore	60.2%	\$607.2	\$174
Malaysia	40.3%	\$396.1	\$31
Philippines	32.2%	\$363.5	\$11
Thailand	27.1%	\$332.1	\$18
Viet Nam	35.1%	\$240.6	\$7
Pakistan	13.0%	\$147.9	\$6
Bangladesh	24.9%	\$113.0	\$3
Sri Lanka	18.8%	\$94.5	\$24
Macau, China	47.2%	\$87.3	\$292
Myanmar	21.0%	\$35.7	\$3
Cambodia	21.0%	\$28.1	\$8

<sup>a</sup> Participation rate measures the share of the total population who participate in this physical activity category on a regular basis (at least monthly). Market size measures consumer expenditures on classes, memberships, entry fees, trainers, and related services and methods of participation.

Source: Global Wellness Institute.

Sports and active recreation comprises the largest category of recreational physical activity because it is the most diverse, accessible, affordable, and prevalent way to be physically active, across every region and population group, rich or poor, young or old, urban or rural, developed or underdeveloped.

**By types of activities.** In Asia and in nearly every country around the world, walking for exercise/recreation by far is the most popular activity. Participation in walking appears to range from 20% to 60% in Asian countries, while an estimated 7%–25% participate in running/jogging.<sup>24</sup> It is challenging to analyze the popularity of playing various team sports because the types of sports played (and included in survey questions) vary so widely from country to country; soccer is the most “universal” sport and appears in nearly every country’s sports participation survey. Other popular

<sup>24</sup> Across much of Asia, survey data that assess the popularity of various types of activities are spotty. The participation estimates, as shown here, are very rough estimates made by the authors, and are based on a scan of participation surveys from 10–12 Asian markets.

activities in Asia include cycling (5%–25%), swimming (8%–12%), dancing (1%–7%), and martial arts (1%–8%).

**By population segments.** Almost across the board, participation rates in sports and active recreational activities are lower for women than for men (the exceptions are for a few activities such as dancing). Sports and active recreation is also the predominant way in which children and youth participate in physical activities. These kinds of activities are critical for introducing children to a lifelong habit of staying active. In fact, out of the 1.3 billion people in Asia who participate in sports and active recreation, an estimated 0.5 billion are children (under age 18). The share of children who participate in sports and active recreation (45%) is higher than the participation rate for adults (24%), because participation tends to taper off as people enter adulthood and face the responsibilities and time constraints of jobs, families, and housework. These participation rates measure people doing at least one activity on a regular basis, but many participants in sports and active recreation often do more than one type of activity. An adult participant may swim laps and play on a volleyball team, while a child may play soccer and take karate or dance lessons.

## 2. Fitness

Just over 1% of the population in Asia are members of gyms, health clubs, and fitness studios and/or participate in structured or independent fitness activities or classes on a regular basis. Participants in Asia spent \$22.7 billion, or an average of \$494 per participant, on doing fitness activities in 2018. These figures are much broader than just the number of paying members at commercial gyms and health clubs, who only represent a portion of the market. We include membership and participation in a variety of other types of gyms and fitness classes in public, nonprofit, university, hotel, outdoor, home, and other settings, both free and paid (see more details below).

Per participant average spending of \$494 in Asia is quite high relative to other regions around the world (e.g., \$383 in North America and \$400 in Europe). This is likely because the fitness market is generally less advanced across most of Asia, and the existing facilities tend to be concentrated in wealthier cities and serve the higher end of the market. Budget/low-frills gym concepts are generally newer and less prevalent outside of major metropolises, and public gyms and subsidized/free fitness classes and programs are also less common in Asia (except in a few key countries, such as Australia, Japan, New Zealand, and Singapore).

Asia's largest fitness markets (Japan; Australia; the ROK, Taipei, China; New Zealand; Hong Kong, China; and Singapore) have highly developed and intensely competitive fitness and gym sectors that cater to their wealthy and sophisticated consumer base. Fitness participation rates across all these markets exceed the global average of 3.7%. All of these markets have experienced steady growth—from internationally branded luxury gyms to small independent studios—spurred by strong purchasing power, population aging, and rising interest in healthier and more active lifestyles. In the major cities across these regions, consumers on the high end are often early adopters of the latest North American and European fitness modules, classes, equipment, and technologies.

Over the past decade, the fitness sector in the PRC has grown rapidly, with the proliferation of gyms, health clubs, and boutique studios in tier 1 cities (and these are now spreading rapidly across tier 2

and tier 3 cities). The PRC is also a leading market for fitness technologies, and its fitness wearables market is now the largest in the world (\$4.6 billion according to the authors' estimates).<sup>25</sup> Fitness apps are wildly popular in the PRC, where an estimated 68.5 million people actively use apps and online platforms to support their fitness and healthy lifestyles (from walking, running, and fitness to *guangchang wu*, cycling, and yoga).<sup>26</sup> The PRC's growing number of middle-income and upper-income consumers have become more health conscious and more interested in exercise, and the fitness sector is expanding rapidly to meet those needs.

**Table 7: Top Twenty Fitness Markets in Asia and the Pacific by Market Size, 2018**

	Fitness		
	Participation Rate <sup>a</sup>	Market Size <sup>a</sup> (US\$ million)	Average Spending per Participant
Japan	7.8%	\$5,554.6	\$561
People's Republic of China	0.8%	\$5,525.4	\$477
Australia	24.3%	\$3,871.7	\$642
Republic of Korea	9.2%	\$2,593.8	\$552
India	0.3%	\$1,020.4	\$263
Indonesia	0.7%	\$547.3	\$303
Taipei, China	5.5%	\$522.6	\$398
New Zealand	20.0%	\$491.7	\$517
Hong Kong, China	9.3%	\$461.7	\$667
Singapore	19.5%	\$429.3	\$381
Thailand	0.9%	\$366.4	\$575
Malaysia	2.2%	\$331.6	\$469
Philippines	0.7%	\$290.8	\$403
Viet Nam	0.6%	\$205.4	\$357
Pakistan	0.2%	\$99.3	\$271
Bangladesh	0.2%	\$94.5	\$315
Macau, China	9.9%	\$58.4	\$933
Sri Lanka	0.5%	\$51.1	\$497
Myanmar	0.2%	\$26.0	\$248
Cambodia	0.7%	\$23.9	\$197

<sup>a</sup> Participation rate measures the share of the total population who are paying members of various types of gym/health club/fitness facilities and/or who access or utilize their services/classes/facilities on a regular basis (at least monthly). Market size measures consumer expenditures on classes, memberships, entry fees, trainers, and related services and methods of participation.

Source: Global Wellness Institute.

<sup>25</sup> Global Wellness Institute (2019).

<sup>26</sup> Y. Zheng. 2018. Online fitness platforms grow in popularity among the young. *The Telegraph*. <https://www.telegraph.co.uk/china-watch/sport/online-fitness-platforms-in-china/>; and X. Liu. 2018. Fitness industry works up a sweat in internet age. *China Daily*. [http://www.chinadaily.com.cn/a/201812/14/WS5c12edf0a310eff303290eea\\_1.html](http://www.chinadaily.com.cn/a/201812/14/WS5c12edf0a310eff303290eea_1.html).



In other major Asian markets, gym and fitness offerings tend to be concentrated in the major metropolises, while remaining underdeveloped across smaller cities and rural regions. Demand for fitness facilities and classes has been rising rapidly among young professionals and urban elites across major cities in Southeast Asia, such as Bangkok, Jakarta, Kuala Lumpur, and Manila. Despite very low rates of participation, India has a sizable fitness sector (valued at \$1.0 billion) because of its sheer population size. In the top metro areas such as Mumbai, Delhi, and Bangalore, high-income urban professionals and a growing middle class have access to a vast array of gyms and fitness clubs. To a certain extent, the void in fitness infrastructure across India, the PRC, and other major markets is now also being met by virtual offerings, as exercisers can increasingly access online classes, virtual personal coaching, and personalized workouts through mobile apps, online platforms, and wearables.

People do fitness activities in a wide range of venues. The authors estimate that over 25 million people are members of private/commercial gyms and fitness facilities in Asia, across over 61,000 locations. This is what most studies generally consider to be the extent of the “fitness market.” However there are many other ways to participate in fitness, and not all of them require monetary expenditures.

- An additional 6.5 million people in Asia utilize public, nonprofit, and public–private gyms and fitness facilities, across 7,600 locations, typically with low or subsidized membership fees. These include (i) government-subsidized (but often privately run) gyms and leisure centers in Australia and New Zealand; (ii) public and city-run gyms and community centers in Japan, Singapore, the ROK, and Hong Kong, China; and (iii) nonprofit facilities such as YMCAs (Australia, New Zealand, and Japan).
- There are an estimated 7,500 free outdoor gyms across Asia (primarily in the PRC, India, and Singapore).
- About 3.7 million people in Asia (mostly students and young adults) access gyms and fitness facilities on nearly 4,500 university campuses.
- An estimated 1,600 hotels in Asia offer public memberships to their fitness centers, serving about 1.2 million members. These gyms are primarily in high-end urban hotels and especially in developing countries. In lower-income countries, hotel gyms are sometimes the front-runner or only fitness offering targeting wealthy elites and expats, before the entry of stand-alone commercial gyms.
- An estimated 24.4 million people in Asia work out independently or at home, using treadmills, stationary bikes, weights, other home-based fitness equipment, as well as books, videos, and other technologies. A significant portion of this number overlaps with other categories above, because many gym members also do workouts at home. Among those doing at-home workouts, an estimated 12.4 million in Asia subscribe to on-demand and streaming fitness services (via online platforms and mobile apps).

While these estimates for the fitness segment primarily focus on gym memberships across different types of facilities, this is not necessarily the best way to assess participation in fitness activities (although it is the most common and feasible measurement, given the availability of data across countries). Paying for a gym membership does not necessarily mean that a person is actually going to the gym frequently or participating in classes. According to the 2018 United States consumer study of the International Health, Racquet & Sportsclub Association (IHRSA) over 12% of Americans with health



club memberships use them less than once a month.<sup>27</sup> Another recent study in the United States found that 6.3% of Americans who have gym memberships do not use them at all.<sup>28</sup> It is likely that the same trend/development can be found in Asia. In fact, many gyms build their business models around a certain portion of members having low usage rates or not using the gym at all.

### 3. Mindful Movement

Mindful movement is the smallest category of recreational physical activities (both in Asia and globally), with \$10.9 billion in consumer expenditures in Asia in 2018. An estimated 4.5% of Asia's population participates in mindful movement activities on a regular basis (which is higher than the global average of 3.8%). Yoga is the predominant activity, followed by tai chi and qigong, Pilates, barre, and a range of other niche activities (e.g., Gyrotonic and Feldenkrais).

The mindful movement market in Asia is a juxtaposition of the old and the new, as traditional spiritual and meditative practices have become coopted as modern exercise trends.

- **Yoga** has deep and ancient roots in India and has been practiced as part of the Hindu religion. However, its current and most popularized form was born in the United States, where yoga was coopted into the fitness industry as a flexible (from mild to rigorous) form of exercise that includes a mindful component. The agnostic and often athletic forms of yoga have become a global phenomenon that is generating its own fitness subsector and related fashion, while influencing food, décor, jewelry, and lifestyle. Asian consumers, including a growing number in India, have now fully embraced the Western style of practicing yoga at gyms, boutique studios, community centers, parks, and other outdoor venues, and using online sources. Although still dominated by younger, more educated, and affluent women, men and older exercisers have begun to join in. Over the past few years, India has reasserted its dominance as the birthplace of yoga. The Government of India has instituted yoga practice among children and youth at schools, and it proposed an International Day of Yoga (June 21) which was adopted by the United Nations General Assembly in 2014. Although yoga data for India are sparse, the authors estimate that over 53 million people in India practice yoga, mostly in its traditional form and with very low expenditures, although Western-style, commercialized, exercise-focused yoga offerings also exist in India's urban areas and tourism-focused establishments, and yoga has seen rapid growth and resurgence in India partly in response to its popularity and media attention in the West.<sup>29</sup>

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<sup>27</sup> IHRSA. 2018. *2018 IHRSA Health Club Consumer Report*. <https://www.ihrsa.org/publications/the-2018-ihrsa-health-clubconsumer-report/>.

<sup>28</sup> Americans spending \$1.8 billion on unused gym memberships annually. *Finder.com*. 1 April 2019 <https://www.finder.com/unused-gym-memberships>.

<sup>29</sup> A. Tripathi. 2016. Number of yoga practitioners increases by 30% across metros: Assocham survey. *Times of India*. <https://timesofindia.indiatimes.com/city/lucknow/Number-of-yoga-practitioners-increases-by-30-acrossmetros-Assocham-survey/articleshow/52832153.cms>; and ASSOCHAM. 2015. *Demand for yoga instructors likely to increase by 35%*: ASSOCHAM. <http://www.assocham.org/newsdetail.php?id=5030>.

- **Tai chi** is an ancient form of martial arts in the PRC that was codified into a structured exercise by various martial arts schools and later by the Government of the PRC (Chinese Sports Committee) in the 1950s. Tai chi has long been practiced by the Chinese people in public places, and is often taught informally when groups gather to exercise in parks or public squares as an early morning ritual. Because the movements are slow, gentle, and deliberate, with a focus on breathing and balance, it is often favored by the elderly. In the PRC, the traditional art of tai chi remains popular—practiced in parks by millions of elderly Chinese—and is now promoted by the government as an important health and cultural practice.<sup>30</sup> Data on tai chi in the PRC are also sparse, but the authors estimate that about 80 million people in the PRC practice tai chi, mostly with very low expenditures. Although less ubiquitous than yoga, tai chi has spread around the world with the Chinese diaspora and is rising in popularity globally among younger participants alongside other mindful, stress-reducing practices and martial arts.

**Table 8: Top Twenty Mindful Movement Markets in Asia and the Pacific by Market Size, 2018**

	Mindful Movement		
	Participation Rate <sup>a</sup>	Market Size <sup>a</sup> (US\$ million)	Average Spending per Participant
People's Republic of China	7.1%	\$5,753.7	\$58
Japan	6.3%	\$1,936.8	\$241
Australia	17.1%	\$867.6	\$205
India	4.0%	\$717.4	\$13
Republic of Korea	5.1%	\$712.3	\$272
Taipei, China	8.6%	\$376.5	\$185
Hong Kong, China	9.0%	\$155.6	\$233
New Zealand	10.7%	\$95.0	\$187
Indonesia	1.7%	\$67.0	\$15
Thailand	2.0%	\$45.3	\$32
Singapore	3.0%	\$39.8	\$231
Pakistan	0.9%	\$29.5	\$16
Malaysia	1.6%	\$27.2	\$52
Philippines	1.2%	\$27.0	\$21
Viet Nam	2.0%	\$25.0	\$13
Sri Lanka	1.4%	\$15.3	\$54
Bangladesh	1.2%	\$12.1	\$6
Macau, China	7.3%	\$10.5	\$226
Myanmar	1.1%	\$4.3	\$7
Cambodia	1.1%	\$3.4	\$20

<sup>a</sup> Participation rate measures the share of the total population who participate in this physical activity category on a regular basis (at least monthly). Market size measures consumer expenditures on classes, memberships, entry fees, trainers, and related services and methods of participation.

Source: Global Wellness Institute.

<sup>30</sup> R. Zhang. 2019. China launches new integrated tai chi platform. *China Internet Information Center*. [http://www.china.org.cn/sports/2019-04/03/content\\_74641794.htm](http://www.china.org.cn/sports/2019-04/03/content_74641794.htm).

Asia's top markets for mindful movement include a number of markets where Western-style, commercialized, exercise-focused yoga, and other mindful movement offerings have proliferated, generating high participation rates and higher-than-average spending patterns (e.g., Japan, Australia, and the ROK). Australia; New Zealand; Hong Kong, China; and Taipei, China all rank in the global top 10 for their mindful movement participation rates, and all of these have a well-developed sector of studios, gyms, and service providers offering classes and training in yoga and other modalities. The PRC and India are also leading markets because of the sheer number of people practicing traditional forms of yoga and tai chi, although per participant expenditures are quite low.

Across Asia, access to formal, Western-style mindful movement classes and studios remains concentrated in the wealthiest and most-developed urban areas. Fees for a single yoga or barre class can range from US\$10 to US\$30 in many specialized studios and full-service gyms, and the cost of equipment-based Pilates training is even higher. However, it is important to keep in mind that the rapidly rising popularity of mindful movement practices has been accompanied by a proliferation of ways in which to participate. In addition to the thousands of chain and independent yoga and barre studios, and classes in comprehensive gyms, there are now classes in YMCAs and community centers, streaming apps, books, and instructional DVDs.

The PRC has been a front-runner in this trend, especially for yoga. A recent market study in the PRC indicates that 31% of yoga class-related expenditures are for online classes. Among those doing yoga in the PRC, 62% use apps and 51% use online videos, while only 35% do yoga at gyms and 16% at small yoga studios. The PRC's Daily Yoga app has an estimated 30 million users in the PRC alone.<sup>31</sup> In Japan, a *Yoga Journal* study indicates that 38% yoga practitioners do so at home or in free/public facilities.<sup>32</sup>

A significant portion of the growth in yoga practice across Asia and worldwide is now in online, at home, and low-cost methods of participation, which is expanding access and lowering cost barriers to participation. In addition, scientific evidence of the efficacy of yoga for mental and physical wellness has led to its introduction in a variety of settings and populations outside the mainstream (and higher-priced) fitness market, such as in prisons, in programs for former soldiers, and in inner-city schools.

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<sup>31</sup> iResearch. 2018. 中国瑜伽行业研究报告 2018年 (*China Yoga Industry Research Report 2018*). <https://www.iresearch.com.cn/Detail/report?id=3260&isfree=0>.

<sup>32</sup> Yoga Journal and Seven & i Publishing. 2017. 日本のヨガマーケット調査 2017 (*Japan Yoga Market Survey 2017*). [https://www.7andi-pub.co.jp/pdf/2017/20170307\\_sevenandi\\_yoga.pdf](https://www.7andi-pub.co.jp/pdf/2017/20170307_sevenandi_yoga.pdf).

### III. Overcoming Barriers to Physical Activity

While the physical activity sector Asia is sizable, it is currently engaging only about one-third of the region's population (with a 33.2% participation rate in recreational physical activities). As noted earlier, between 16% and 36% the adults across different regions within Asia are not getting sufficient physical activity by any method (via natural movement or recreational activities).<sup>33</sup> The large and growing share of the region's population with insufficient physical activity represents a major ongoing public health challenge, especially alongside rising rates of obesity and chronic disease. The solution lies in addressing the major barriers to physical activity across all spheres of life—from leisure and recreation options, to increasing the natural movement embedded in daily life (i.e., transportation, domestic, and occupational physical activity).

#### Key barriers to increasing physical activities

To explore how to engage more people in physical activity, the authors reviewed more than a dozen national surveys and studies<sup>34</sup> that collect information on the motivations for and barriers against participation in physical activities. While these studies employed different methodologies, were conducted in different languages, and differed in the way they framed questions and responses, in aggregate they reveal important findings about physical activity motivations and barriers.

- **Motivations.** When people were asked why they engage in regular physical activity, by far the most cited reason is for maintaining good health (also “physical wellbeing,” “to feel good,” “to be fit,” and other similar responses). The next most cited reasons are related to stress reduction (“to relax,” “for emotional wellbeing,” and “for mental health”). Other motivations include being with friends and family, building muscle strength, to look good, weight loss, to be out in nature, and to feel challenged/fulfilled or for self-improvement.
- **Barriers.** For those who do not engage in regular physical activity, the most significant barrier for adults is lack of time, followed by health problems, lack of energy (or too tired), and too lazy. For children and youth, the most frequently mentioned barrier is lack of time because of school work. Other reasons cited by the youth include the lack of interest or lack of opportunity.

It is not a surprise that those who are physically active cite health as their main motivation. It is also not surprising that time constraints are the most significant barrier for those who are inactive, especially in higher-income countries. More surprising is that physical conditions (e.g., health-related reasons, illness, age, or the perceived inability to engage in physical activity) are frequently mentioned as a barrier, more so than cost/money constraints or access to facilities. Outside of Asia, women and girls have mentioned personal safety and being uncomfortable at a gym as a concern, particularly in

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<sup>33</sup> R. Guthold et al. 2018. Worldwide trends in insufficient physical activity from 2001 to 2016: a pooled analysis of 358 population-based surveys with 1.9 million participants. *The Lancet Global Health*, 6(10), e1077-1086. [https://doi.org/10.1016/S2214-109X\(18\)30357-7](https://doi.org/10.1016/S2214-109X(18)30357-7).

<sup>34</sup> These studies cover Hong Kong, China; Japan; Malaysia; New Zealand; the Philippines; the ROK; Singapore; Taipei, China; Thailand; and Viet Nam. The studies reviewed are in the references.

countries where gender and social norms discourage female participation in sports and outdoor recreation, in co-ed settings, or in certain types of physical activity. While these questions were not included in the surveys in Asian countries reviewed by the authors, it is very likely that similar barriers exist for women and girls in some parts of Asia.

## Business innovations and public initiatives can help to overcome barriers and close the physical activity gap.

While substantial barriers exist, it is possible to address them. This section provides examples of innovations, business models, and public policy initiatives that can help overcome barriers to physical activity, increase participation, and extend the many benefits of movement to more people around the world.

### Leveraging technology

The most important barrier to participating in physical activity is time constraints. While most people are aware of the benefits of physical activity, their busy lives (work, school, and family obligations) zap energy and preclude many people from exercising when it competes with other priorities. In the last 5–10 years, ubiquitous broadband/WiFi services and ownership of mobile devices have enabled the proliferation of exercise apps and streaming services that help people fit exercise into their busy schedules. The options are increasingly diverse and abundant, from free YouTube videos and mobile apps, to fitness video games (or “exergaming”), to paid monthly subscription services and sophisticated networked equipment. Workouts can be accessed via live-streamed classes or downloadable pre-recorded videos, and through computers, mobile devices, wearables, and gaming systems. These services now enable people to exercise at home or in any other convenient location, at any time of day, any intensity, and any length. They are particularly important in markets where the infrastructure, facilities, and programming for physical recreation are limited.

Technology is also being used to make physical activities more fun and rewarding, especially by tapping into the competitive spirit and social aspect of exercising (virtually) with peers. “Gamification” has become one of the most popular trends and buzzwords in the fitness industry. The latest fitness equipment often incorporates high-tech functions (e.g., high-resolution video displays, biometric sensors, and cameras) that allow participants to track their metrics and compare/compete with peers virtually and in real time. Fitness games, which have engaged children, teens, and families since the 1980s, have progressed from home-based video gaming systems (e.g., *Dance Dance Revolution* and *Wii Fit*) to employing augmented reality and Global Positioning System technologies that take exercise gaming outdoors (e.g., *Pokémon GO*, *Ingress*, *Zombies*, and *Run!*). Exergaming and health games are now attracting broad attention, even from the medical and research communities, for their potential to leverage gaming’s appeal to encourage exercise and change behaviors, from young children to aging seniors.<sup>35</sup>

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<sup>35</sup> S.G. Parker. 2015. Health Games Research: Advancing Effectiveness of Interactive Games for Health. *Robert Wood Johnson Foundation Program Results Report*. <https://www.rwjf.org/en/library/research/2011/03/advancing-the-field-of-health-games.html>.

Some country governments are recognizing the potential of consumer-based technologies to support public health priorities. In 2019, Singapore's Health Promotion Board established a partnership with Fitbit to launch Live Healthy SG—a healthy population initiative built on a digital health platform.<sup>36</sup> The aim is to enroll one million Singaporeans by offering them free wearable devices (i.e., Fitbits) if they commit to a 1-year service agreement, which will provide personalized programs, health and fitness guidance, and behavioral insights that support healthy lifestyle habits, including physical activity, sleep, nutrition, and emotional wellbeing. The integration of personal health data will also support the development of health analytics on a national level. This represents the first major integration of fitness wearables into a national public health program anywhere in the world.<sup>37</sup>

## Physical activity in the work day

Work is a key reason that adults do not have time for regular physical activity. Yet, physical activity during the workday is more important than ever given our stressful, fast-paced, but increasingly sedentary work lives. A growing number of employers are aware that unhealthy employees can be bad for the bottom line, because of reduced productivity, higher health care costs, higher absentee rates, and other costs. Many workplace wellness programs now provide amenities and “perks” that encourage employees to be more active, such as employer-subsidized gym memberships, corporate gyms, free on-site fitness and yoga classes, free fitness bands, workplace running clubs, and employee fitness challenges. Employers can also proactively incorporate movement directly into their employees' work days; for example, conducting walking meetings, providing daily stretching and activity breaks, allowing for exercise during paid work hours, providing flextime for workers to participate in fitness and outdoor recreation, encouraging casual attire that is conducive for movement, installing banks of treadmill and stationary bike desks, and designing movement-friendly workplaces (e.g., open and attractive stairwells).

## Fitness for seniors

Rising life expectancies, chronic disease, unsustainable health care costs, and the ample leisure time of the senior population are converging in the growing need and opportunity for “silver fitness.” In Japan, seniors (age 60 and above) now make up a substantial portion of fitness club membership and spend more on fitness and sports facilities than any other segment of the population.<sup>38</sup> In 2018, Australia's first Club W opened as a boutique fitness and wellness lifestyle space, aimed at providing an intimate, social “third place” that serves women over 55, who may otherwise be uninterested in,

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<sup>36</sup> C. Farr. 2019. Fitbit wins contract with Singapore to supply trackers to potentially hundreds of thousands of citizens. *Consumer News and Business Channel*. <https://www.cnn.com/2019/08/21/fitbit-to-supply-trackers-to-hundreds-of-thousands-in-singapore.html>.

<sup>37</sup> J. Somauroo. 2019. Fitbit Partners With Singapore Government To Offer Trackers To 5.6 Million People. *Forbes*. <https://www.forbes.com/sites/jamesomauroo/2019/08/22/fitbit-partners-with-singapore-government-to-offer-trackers-to-56m-people/#176c8d7a2031>; K. Kwang. 2019. HPB partners Fitbit to encourage Singaporeans to adopt healthier habits. *Channel News Asia*. <https://www.channelnewsasia.com/news/singapore/hpb-fitbit-encourage-singaporeans-adopt-healthier-habits-11828980>; and F. Farr. 2019. Fitbit wins contract with Singapore to supply trackers to potentially hundreds of thousands of citizens. *CNN*. <https://www.cnn.com/2019/08/21/fitbit-to-supply-trackers-to-hundreds-of-thousands-in-singapore.html>.

<sup>38</sup> Japan's fitness industry adapts to ageing demographics. *Australasian Leisure Management*. 28 June 2018. <https://www.ausleisure.com.au/news/japans-fitness-industry-adapts-to-ageing-demographics/>.

or intimidated by, mainstream gyms and fitness studios.<sup>39</sup> However, many seniors do not have the means to pay for private exercise facilities. In the PRC, over 600,000 pieces of outdoor gym equipment (including jungle gyms, pull-up bars, ping pong tables, metal bikes, elliptical machines, and exercise pavilions) have been installed in neighborhood parks to facilitate outdoor exercise among the senior population. In fact, parks across the PRC are primarily used by seniors, and their design and equipment often target older users rather than the youth. This concept of “senior playgrounds” first originated in the PRC in the 1990s, but quickly spread in Asia (Japan, Taipei, China), Europe, and North America. In Europe and North America, senior playground facilities tend to be co-located with children’s playgrounds (so seniors can exercise while minding their grandchildren) or designed as multigenerational spaces.<sup>40</sup> Exercising in public spaces also provides other important benefits, such as regular social interactions for seniors who are susceptible to loneliness and social isolation.

## Prescribing exercise

The majority of exercise facilities and classes serve people who are already active or capable of physical activities, leaving out many people whose medical or physical conditions make it difficult for them to exercise, even though they would benefit greatly from it. Having a physician prescribe exercise as part of a treatment plan can give patients a powerful nudge. Exercise is Medicine (or EIM, co-launched by the American College of Sports Medicine and the American Medical Association in 2007) advocates for physical activity to be included as a standard part of medical treatment and the patient care process, with physicians providing assessments, counselling, a prescription for exercise where appropriate, and a referral to available resources. A number of Asian countries have joined the EIM global network, including Hong Kong, China; Indonesia; Japan; Malaysia; the PRC; the Philippines; the ROK; Singapore; Sri Lanka; Taipei, China; and Thailand.<sup>41</sup> EIM host institutions include a variety of academic, scientific, medical, industry, nonprofit, or government organizations, focused on sports medicine and fitness. As part of the EIM initiative, Singapore has launched Active Health Labs as a collaboration between Sports Singapore and other public health institutions. Active Health Labs conducts assessments and takes referrals from physicians in order to prescribe and implement appropriate physical activity for patients, in order to treat, manage, and prevent common chronic health conditions.

## Publicly funded infrastructure, facilities, and programs

It does not have to cost anything to be physically active, if people can access public infrastructure, parks, green spaces, running and biking paths, outdoor gyms, and recreational facilities and programs. In the PRC, older men and women gather daily in public parks to do tai chi, while millions of people, mostly women, have taken up “plaza dancing” (or *guangchang wu*), a form of synchronized dance accompanied by pop music that mostly takes place in public plazas and parks. Just providing open and safe spaces can enable this kind of spontaneous group exercising to take place. As governments around the world increasingly turn to physical activity as a way to keep their populations healthy and to prevent disease, they are investing in the necessary infrastructure to support these aims. The authors’

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<sup>39</sup> K. Cracknell. 2018. New concept: Tony de Leede’s Club W. *Health Club Management*, Issue 7. <https://www.healthclubmanagement.co.uk/health-club-management-features/Tony-de-Leedes-Club-W/32858>.

<sup>40</sup> L. Abbit. 2015. Playgrounds for Seniors Coming Your Way. *Senior Planet*. <https://seniorplanet.org/playgrounds-for-seniors/>.

<sup>41</sup> *Exercise is Medicine Global Presence: Global Directory*. [https://exerciseismedicine.org/eim\\_map/](https://exerciseismedicine.org/eim_map/).



research has identified more than 7,500 free outdoor gyms in Asia and more than 21,000 worldwide (also known as “biosaludables,” calisthenics parks, or senior playgrounds). These parks are particularly popular in some parts of Asia (the PRC, the ROK, India, and Singapore). In the PRC, outdoor gyms target the senior population. In New Delhi, India, members of Parliament have used local development funds to install 1,700 open-air gyms in parks throughout the city since 2016, and hundreds more are in development, each costing about US\$10,000 to install.<sup>42</sup> In a few higher-income countries, governments provide subsidized and low-cost fitness centers for their citizens, with varying levels of quality and services. City-run gyms, leisure centers, and sports/recreation centers are abundant in Japan and Singapore (as detailed in section II), as well as the ROK and Hong Kong, China. As more nations implement “national fitness and exercise” and “sport for all” plans, public investments in such infrastructure, programs, and activities will likely increase.

## Physical activity in schools

To cultivate a lifelong habit of staying active, it is important to start at an early age. Physical education classes in schools are recognized as essential for helping children build awareness, skills, and lifelong habits of physical activity; they also contribute to better mental wellness, social development, academic performance, and school outcomes. According to a global study by the United Nations Educational, Scientific and Cultural Organization (UNESCO), 90% of countries in Asia have legal or de facto requirements for some provision of physical education in schools.<sup>43</sup> These requirements vary widely across Asian countries from 180 minutes per week in Bangladesh and 150 minutes in the ROK, to 35 minutes per week in Pakistan, and 45 minutes in Afghanistan and Nepal. In some countries, physical education requirements decline significantly between primary and secondary schools, e.g., from 100 minutes to 25 minutes in Myanmar, and from 60 minutes to 40 minutes in India, just at the age when youth physical activity levels start to decline, while sedentary behavior and the use of mobile devices begin to rise. In more than half of the Asian countries surveyed, physical education is perceived to have a lower status than other subjects in schools, and therefore receives lower priority in teacher training, funding, facilities, and consistency of holding classes. The quality of physical education facilities is reportedly inadequate in 40% of the Asian countries surveyed. Given that many children and teens do not have access to private sporting clubs and activities, prioritizing physical education at school may be one of the highest-impact ways to increase physical activity participation. It is also important to ensure gender equity and inclusion in physical education. Among all the world regions, Asia has the greatest inequity between girls and boys with respect to the amount, quality, and content of physical education programs in schools.<sup>44</sup> In some communities, girls are discouraged by social/cultural norms and may even be forbidden by parents to participate in sports or exercise

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<sup>42</sup> M. Manohar and P. Singh. 2018. New Delhi: Open gyms make fitness a mass exercise. *Times of India*. <https://timesofindia.indiatimes.com/city/delhi/open-gyms-make-fitness-a-mass-exercise/articleshow/65507526.cms>; and A. Mishra and R. Chitlangia. 2019. Why open-air gyms topped Delhi MPs’ list of development projects. *Hindustan Times*. <https://www.hindustantimes.com/delhi-news/why-open-air-gyms-topped-delhi-mps-list-of-development-projects/story-uVwa3VLjcn8de5flfcROxJ.html>.

<sup>43</sup> Asian countries included in the UNESCO study are Afghanistan; Bangladesh; Bhutan; Cambodia; Hong Kong, China; India; Indonesia; Japan; Kazakhstan; Kyrgyz Republic; the Lao People’s Democratic Republic; Malaysia; Mongolia; Myanmar; Nepal; Pakistan; the PRC; the ROK; Singapore; Sri Lanka; Turkmenistan; Uzbekistan; and Viet Nam. UNESCO. 2014. *World-wide Survey of School Physical Education*. Paris: UNESCO. <https://en.unesco.org/inclusivepolicylab/e-teams/quality-physical-education-qpe-policy-project/documents/world-wide-survey-school-physical>.

<sup>44</sup> UNESCO (2014).



outdoors. Such norms can sometimes be eased when public policies and awareness campaigns promote a broader understanding of the beneficial impacts of physical education and physical activities.

Outside of physical education classes, it is also important to instill movement throughout the school day, especially as the amount of time allotted to physical education each week (averaging 84 minutes per week in Asian primary schools) falls short of the 1 hour of activity per day recommended for children by the WHO.<sup>45</sup> Some schools (mostly outside of Asia) are experimenting with ways to incorporate movement and play into the classroom and the school day, such as play-based lessons, movement breaks, and activity-based equipment and active seating (e.g., balance balls, pedal desks, yoga mats, and balance boards), departing from the tradition of having children sitting quietly at desks all day. The Daily Mile initiative, first conceived by a Scottish teacher in 2012, is an initiative that has primary school students take a 15-minute break every school day (outside of formal physical education classes) to run or jog outside. The initiative has been lauded for its simplicity and inclusiveness, helping children get exercise and fresh air without any special equipment, funding, or training required of the schools and teachers. More than 9,300 schools, including in a dozen countries in Asia, now take part in the Daily Mile, and research has shown significant health benefits for participants.<sup>46</sup> The “walking school bus” concept, first developed in Japan several decades ago, organizes groups of children to walk to school along a set route, with designated “bus stops” and “pick up times” similar to a regular school bus. In the last 20 years, the concept has spread to hundreds of schools across the United Kingdom, Australia, New Zealand, Europe, and North America.

### Putting “play” back in sports

Outside of formal physical education in schools, sports are the most important access point for children to learn physical skills and build a lifelong habit and love of being active. Sports used to be a fun, informal activity that children did in their free time, and it remains so in many less-developed and lower-income regions. However, over the past few decades (along with urbanization, rising incomes, and the growth of the middle class), youth sports have become formalized, more expensive, and competitively focused around the world (often following the United States model), including in Asia. Unfortunately, the trajectory that youth sports have taken tends to discourage youth from staying in sports if they are not playing at a competitive level. When it is simply considered “play” or recreation, and not an opportunity for achievement, sports are often not valued by Asian parents, especially when compared with the importance of studying and doing well on exams. Elsewhere in the world, the most lauded and healthy approach to youth sports is the model in the Nordic countries, which view youth sports as a major public health and welfare concern. In Norway, organized sports clubs and teams are guided by policies established in the 1987 “Children’s Rights in Sport” doctrine, which prohibits high-level competition before ages 11–13, prohibits publishing scores or rankings for younger children, emphasizes fun and friendship, keeps costs low, and encourages children to plan and execute their own sporting activities and training.<sup>47</sup> These policies have resulted in more children playing more

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<sup>45</sup> UNESCO (2014).

<sup>46</sup> *The Daily Mile*. <https://thedailymile.co.uk/>; and J. McIvor. 2018. Daily Mile ‘significantly improves health.’ *BBC News*. <https://www.bbc.com/news/uk-scotland-44053387>.

<sup>47</sup> T. Farrey. 2019. Does Norway Have the Answer to Excess in Youth Sports? *New York Times*. <https://www.nytimes.com/2019/04/28/sports/norway-youth-sports-model.html>.

sports for fun, more free play, overall higher levels of physical activity among youth, and a higher persistence of sports involvement into adulthood.

## Embedding physical activity in the built environment

As natural movement has progressively diminished in our modern lives, many people cannot find the time to replace this lack of movement with intentional, recreational physical activities. And many people choose not to exercise, even if they do have the time, because they do not find sports or fitness activities to be appealing. Therefore, an important way to keep people physically active is by making movement a default in daily life, through infrastructure, design, and convenient amenities. For far too long, the design of neighborhoods, buildings, and cities has been driven by efficiency and convenience. For decades, urban planning and infrastructure have focused on how to get people to their destinations in the quickest way, prioritizing vehicular traffic, and with little regard to how these kinds of built environments diminish physical activities or their consequences on our health and wellbeing. In recent years, movements such as new urbanism, active design, and the sustainability/green movement have advocated for planning and design approaches that encourage natural movement. Active design and active transit features that are becoming more common include attractive and accessible stairways; walkways and pedestrian paths within and between buildings; access to public transit; creating sidewalks, dedicated bike lanes, and bike parking/storage areas; vibrant streetscapes; and other design and infrastructure features that make human-powered movement the easy, convenient, attractive, and default/preferred way to go from place to place. These features help add natural movement back into daily life and can go a long way in helping people meet the daily requirement of moderate physical activity.<sup>48</sup> Increasing active transport also helps to promote sustainability by reducing vehicular traffic and the associated environmental pollution.

A burgeoning wellness real estate movement around the world is helping to embed physical activity in the built environment in many different ways. The wellness real estate sector is substantial, valued by GWI in 2017 at \$46.8 billion in Asia, and grew at an annual rate of 7.3% between 2015 and 2017.<sup>49</sup> Most wellness-focused real estate projects prioritize walkability and physical activity, with features and amenities, such as jogging paths, bike paths, swimming pools, recreation centers, fitness clubs and classes, parks, and playgrounds. The more these features are convenient and located within people's neighborhoods and communities, the more likely people will access them regularly to be active. Some neighborhoods sponsor programming, activities, and events that make physical activity an opportunity for socializing and being part of the community. In Malaysia, Kundang Estates markets an active lifestyle by incorporating 14 acres of interconnected parks, herb gardens, a reflexology path, jogging/biking paths, and a children's garden/adventure park. These kinds of communities are emerging and becoming more prevalent, especially in competitive real estate markets across the world, including in Asia.<sup>50</sup>

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<sup>48</sup> For more information on active design: Center for Active Design. 2010. *Active Design Guidelines: Promoting Physical Activity and Health in Design*. <https://centerforactivedesign.org/guidelines/>.

<sup>49</sup> Global Wellness Institute. 2018. *Build Well to Live Well, Wellness Lifestyle Real Estate and Communities*. <https://globalwellnessinstitute.org/industry-research/wellness-real-estate-communities-research/>.

<sup>50</sup> Global Wellness Institute (2018).

## Safe and comfortable public spaces for women

Social/religious norms and government regulations can be significant barriers for women to be physically active. In some countries, the fear of harassment and even violence can greatly discourage women and girls from engaging in outdoor physical activities. In recent years, a number of countries have created women's parks to provide "safe" places for women to get outdoor recreation and fresh air. For example, in 2012, the first "women only" park opened in Lahore, Pakistan, a 4-acre space secured behind 7-feet high walls, with its own jogging track, gymnasium, and badminton court.<sup>51</sup> Women-only parks have also been opened in Afghanistan so that women can enjoy the outdoors and engage in physical activity without being accompanied by male family members.<sup>52</sup> Other strategies to provide women with safe spaces include setting aside hours in parks and gyms for use exclusively by women. Outside Asia, new policies in Saudi Arabia that grant business licenses to female-only gyms have spurred the opening of many private fitness facilities that cater to growing demand from female customers.

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<sup>51</sup> S. Ali. 2012. Are women-only parks the answer to street harassment in Pakistan. *Independent*. <https://www.independent.co.uk/voices/comment/are-women-only-parks-the-answer-to-street-harassment-in-pakistan-8223147.html>; and R. Khan. 2012. Six women's-only parks being developed. *Tribune*. <https://tribune.com.pk/story/434063/harassment-protection-six-womens-only-parks-being-developed/>.

<sup>52</sup> IWPR Afghanistan. 2016. Afghanistan's women-only parks. *Global Voices Asia*. <https://iwpr.net/global-voices/afghanistans-women-only-parks>.

## IV. Key Takeaways

### Physical inactivity is a rising global public health crisis.

Physical inactivity is the fourth leading cause of death in the world. Along with obesity, it is a key lifestyle risk factor for chronic disease. Modern lifestyles and built environments are making us more sedentary and removing natural movement from daily lives. 27.5% of the world's adult population has insufficient levels of physical activity (i.e., not meeting World Health Organization standards). Inactivity rates are generally higher in high-income countries in Asia (35.7%) and South Asia (33.0%), and lower in East and Southeast Asia (17.3%) and Oceania (16.3%). Women and girls tend to be more inactive than men and boys.

### Asia has one of the largest and most diverse physical activity markets in the world, valued at \$240.4 billion in 2018.

This includes \$116.6 billion of direct consumer expenditures for participating in recreational physical activities (sports and active recreation, fitness, and mindful movement) and \$125.5 billion of expenditures for enabling and supporting sectors (clothing and footwear; fitness equipment, sporting goods, and related supplies; and fitness- and exercise-related technologies).

### Higher spending does not mean a higher level of overall participation, and participation does not require expenditures.

33.2% of Asia's population participates in recreational physical activities on a regular basis (global average is 35.5%), with sports and active recreation being the most popular activities. Many people in Asia conduct their leisure-time physical activity with little or no spending (e.g., in public parks and plazas, in free sporting facilities, in the streets, at home, and by using free Apps). Governments can support physical activity participation by investing in sports and physical recreation infrastructure, facilities, programs, and activities for the public to access at very low or no cost.

### The greatest barrier in Asia for engaging in physical activities is lack of time.

The biggest barrier in Asia is lack of time, followed by health problems, lack of energy (or too tired), being lazy (adults), and lack of interest/opportunity (youth). The biggest motivation to do regular physical activity is for maintaining good health, and stress reduction/relaxation/mental health.

### Business innovations and public initiatives can help to overcome barriers and close the physical activity gap.

- Leverage technology to improve access.
- Increase physical activity in the work day.
- Enable fitness for seniors.
- Prescribe exercise.
- Fund infrastructure, facilities, and programs for the public.

- Encourage physical activity in schools.
- Put play back in sports.
- Embed physical activity in the built environment.
- Create safe and comfortable public spaces for women.

# Appendix: Physical Activity Economy Sector Definitions

## Physical Activity Definitions

**Physical activity.** The World Health Organization (WHO) defines physical activity as “any bodily movement produced by skeletal muscles that requires energy expenditure – including activities undertaken while working, playing, carrying out household chores, travelling, and engaging in recreational pursuit.” According to the WHO, in order to maintain good health, children and adolescents need 60 minutes of moderate- to vigorous-intensity physical activity daily, while adults need 150 minutes of moderate to intensity physical activity, or 75 minutes of vigorous-intensity physical activity, on a weekly basis.<sup>53</sup>

Physical activities can be divided broadly into natural movement and recreational physical activity.

- Natural movement encompasses the physical activities that are essential to our daily lives, including transportation (e.g., walking and cycling as transportation), occupational (e.g., work that requires manual labor), or domestic (e.g., household chores and gardening) movement. These kinds of activities have been the core of physical activity for humankind for millennia. Unfortunately, as discussed below, natural movement is now on the decline around the world, progressively discouraged by our modern lifestyles and built environments.
- We engage also in optional and intentional movement as part of our hobbies and leisure time. Recreational physical activity can include going to the gym, playing sports, taking a walk, cycling for fun, dancing, and children playing on a playground. As natural movement declines, recreational physical activity is becoming essential for a growing number of people for them to stay healthy.

## Physical Activity Economy Definitions

**Physical activity economy.** The authors and the Global Wellness Institute (GWI) defined the physical activity economy (or market) as “consumer spending associated with intentional physical activities performed during leisure and recreation.” The core of the market is the services that allow consumers to participate in three categories of recreational physical activities: fitness, sports and active recreation, and mindful movement. The market also includes three supporting sectors that enable and facilitate consumer participation in these activities: technology, equipment and supplies, and apparel and footwear.

The figures presented in this report focus on private expenditures on recreational physical activities, which are the best gauge for the rising consumer interest in intentional recreational/leisure time physical activities and related services. While public expenditures are also an important component of

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<sup>53</sup> World Health Organization (2018). Physical Activity: Key Facts. *WHO Fact Sheet*. <https://www.who.int/news-room/fact-sheets/detail/physical-activity>.

the physical activity economy, they are not estimated as part of the data presented in this paper. There is no sufficient data to make a credible estimate of government expenditures in this sector because this spending occurs at multiple levels of government (local, regional, and national) and across multiple agencies and budgetary items (including transportation and infrastructure, parks and recreation, and sports).

## Core Market: Recreational Physical Activities

Recreational physical activities are segmented into three categories (as described further below). Many individuals will participate in multiple activities across these three sectors, and so each category is measured separately; the authors account for overlap when we roll together the three categories to measure the total physical activity market.

The authors use a consumption-based approach for measuring the physical activity market, and for each segment we estimate two key indicators:

- **Participation in recreational physical activities.** The estimated percent of the population that participates in each category of recreational physical activity. In this study, “participation” is generally defined as doing the activity at least once a month or with some regularity. The participation estimates are agnostic of *where or how* people perform the activity. For example, people who do yoga may take a class at a specialized yoga studio, may take a class at a gym or YMCA, may use a streaming or on-demand class, or may simply practice yoga alone at home. For this study, all of these methods would count as “participation in yoga” if they are done with regularity.
- **Consumer spending on recreational physical activities.** The estimated direct, out-of-pocket expenditures by consumers each year in order to participate in each category of recreational physical activity. This figure is limited to expenditures on services for actually doing an activity, i.e., gym or studio memberships, fees for classes and training, sports team or club dues, entry fees for events/competitions/tournaments, and other associated services. Non-service expenditures are measured in separate, supporting categories (as described below). In some instances, fees may be subsidized (such as in facilities/programs run by nonprofits or local governments). In these instances, the study still counts consumer *participation* in the activity although out-of-pocket expenditures would be reduced or possibly zero. Likewise, for some activities, there is no service provider or participation fee (for example, running in the park or playing a pickup basketball game with friends), and in these instances the study counts consumer participation in the activity although the expenditures are zero.

**Sports and active recreation.** This category includes a wide range of sports and recreational activities: team sports (e.g., soccer, basketball, and volleyball); individual sports (e.g., tennis, swimming, and gymnastics); indoor sports (e.g., squash, wrestling, and martial arts); outdoor sports (e.g., skiing, rowing, and bicycling); as well as a variety of recreational pursuits (e.g., hiking, trail running, kayaking, parasailing, rock climbing, and dancing). The common denominator among these is that they all involve movement and physical activity that contribute to good health. Sports are typically more structured, are governed by specific rules or forms, and often involve an element of competition; participants are usually motivated by mere enjoyment of the activity (fun and games), athletic achievement,

competition, and/or camaraderie and team spirit. Active recreational activities are often less structured and formalized, although many require instruction, mastering special skills, or adhering to specific systems or forms (e.g., different schools of martial arts and dance forms). Consumers may pursue active recreation because they enjoy the activity, working toward specific skills goals, being part of a community, and/or being outdoors. Sports and active recreation attract people of all ages and abilities: children, youth, adults, and seniors.

**Fitness.** Consumers engage in structured fitness activities with the intention of becoming physically fit or maintaining desired physical conditions, which may encompass cardiovascular health, functional fitness, flexibility and strength, and weight loss or weight management. Fitness activities most often take place at gyms, health clubs, and fitness studios, but can also happen in home-based gyms, outdoor gyms, community centers, schools, hotels, or other venues. These activities are often conducted under the supervision of trainers or are led by teachers in small or group class settings. Fitness activities usually rely on equipment or machines, or they follow a protocol of exercises for conditioning and training. As such, this category includes diverse activities, from indoor cycling/spinning, treadmill running, and weight training, to aerobic dance, Zumba, cardio kickboxing, high-intensity interval training, CrossFit, aqua aerobics, and much more. The participants in this market are primarily (but not exclusively) adults. Walking, running, jogging, and cycling in a gym, in a class, or using a piece of fitness equipment (treadmill or stationary bike) are included in the fitness category, while doing these activities outside of a gym-, class-, or equipment-based setting is generally counted as part of sports and active recreation.

**Mindful movement.** This category captures the exercise modalities that combine movement with mental/internal focus, body awareness, and controlled breathing, with the intention to improve strength, balance, flexibility, posture and body alignment, and overall health. Mindful movement includes activities such as yoga, tai chi, qigong, Pilates, stretch, and barre, as well as other less mainstream somatic, bodywork, and energy-based methods such as Gyrotonic and Gyrokinesis, Nia Technique, Feldenkrais Method, and 5Rhythms. While these classes are increasingly offered at gyms and fitness studios as part of a comprehensive fitness class offering, consumers usually turn to them with the intentions of improving mind-body health and mental focus, and for stress-relief and mindfulness, in addition to physical exercise. The participants in this market are primarily, but not exclusively, adults.

## Physical Activity Enabling Sectors

In addition to direct expenditures on services, consumers also make related purchases that enable and support their participation in recreational physical activities. The authors measure three categories of enabling sectors.

**Technology.** In recent years, technology has greatly transformed the fitness and physical activity markets, enabling consumers to track their own metrics, monitor performance and progress, access programs and services on demand, and connect with communities. This category includes technology-enabled hardware/devices and software/services that support fitness, sports, and active recreation. Hardware, equipment, and devices include wearable fitness trackers (e.g., fitness bands such as Fitbit, Garmin, Polar, Huawei Band, Xiaomi Mi Band, and other types of step/movement/cardio trackers, but



excluding the broader category of smartwatches, like Apple Watch, which are not exclusively for fitness); smart/sensor-embedded fitness and sports clothing, shoes, and eyewear; and smart/sensor-embedded/networked fitness equipment and sporting goods. Software, apps, and services include: fitness, exercise, and nutrition apps and online services that are used for tracking, analyzing, learning, and sharing activities and achievements (e.g., My Fitness Pal, Samsung Health, Google Fit, Runtastic, Pacer, and Yodo Run); streaming and on-demand fitness workout/class services (e.g., Peloton, Mirror, Keep, Beachbody On Demand, Daily Burn, and Daily Yoga); and fitness, sports, and recreation intermediary, booking, management, and marketing software, apps, and platforms (e.g., ClassPass, Mindbody, Active Network, Daxko, and My PT Hub).

**Equipment and supplies.** This category includes a wide variety of equipment and supplies used to engage in fitness, sports, and active recreation, including sporting goods (e.g., balls, rackets, bats, and clubs; bicycles; climbing equipment; and ice skates); protective gear (e.g., helmets, padding, and gloves); as well as fitness/exercise/training equipment and supplies (e.g., treadmills, stationary bikes, other gym equipment, free weights, resistance bands, blocks, and mats). This measurement captures the entire market size for these kinds of equipment and supplies, whether they are sold directly to consumers or to gyms, health clubs, and sports clubs.

**Apparel and footwear.** This category captures the clothing and footwear used for fitness, sports, and active recreation, from ski pants to yoga leggings, and from running shoes to hiking boots. Since dressing has become more casual over the past few decades, and fitness has become both a daily activity and an aspirational lifestyle in many places, it is increasingly common for people to wear athletic/sports-inspired clothing and athletic shoes as everyday casualwear (i.e., “athleisure”). Therefore, it would be impossible to separate what consumers purchase and wear specifically and exclusively for physical activity, when those same pieces of clothing and shoes are also worn outside of the gym or when people are not exercising.

## Global Wellness Institute Regional Grouping of Countries

Africa	Asia-Pacific	Europe	Latin America & Caribbean	Middle East & North Africa
Angola	American Samoa	Albania	Anguilla	Afghanistan
Benin	Australia	Andorra	Antigua & Barbuda	Algeria
Botswana	Bangladesh	Armenia	Argentina	Bahrain
Burkina Faso	Bhutan	Austria	Aruba	Egypt
Burundi	Brunei	Azerbaijan	Bahamas	Iran
Cameroon	Cambodia	Belarus	Barbados	Iraq
Cape Verde	China	Belgium	Belize	Israel
Central African Republic	Fiji	Bosnia Herzegovina	Bermuda	Jordan
Chad	French Polynesia	Bulgaria	Bolivia	Kuwait
Comoros	Guam	Croatia	Brazil	Lebanon
Congo, Dem. Rep.	Hong Kong	Cyprus	British Virgin Islands	Libya
Congo, Rep.	India	Czech Republic	Cayman Islands	Morocco
Cote d'Ivoire	Indonesia	Denmark	Chile	Oman
Djibouti	Japan	Estonia	Colombia	Qatar
Equatorial Guinea	Kiribati	Finland	Costa Rica	Saudi Arabia
Eritrea	Korea, Dem. Rep.	France	Cuba	Syria
Ethiopia	Laos	Georgia	Curacao	Tunisia
				United Arab Emirates
Gabon	Macau	Germany	Dominica	West Bank & Gaza
Gambia	Malaysia	Greece	Dominican Republic	Yemen
Ghana	Maldives	Hungary	Ecuador	<b>North America</b>
Guinea	Marshall Islands	Iceland	El Salvador	
	Micronesia, Fed. Sts.	Ireland	Grenada	Canada
Guinea-Bissau	Mongolia	Italy	Guadeloupe	United States
Kenya	Myanmar	Kazakhstan	Guatemala	
Lesotho	Nepal	Kyrgyzstan	Guyana	
Liberia	New Caledonia	Latvia	Haiti	
Madagascar	New Zealand	Liechtenstein	Honduras	
Malawi	Northern Mariana Islands	Lithuania	Jamaica	
Mali	Pakistan	Luxembourg	Martinique	
Mauritania	Palau	Macedonia	Mexico	
Mauritius	Papua New Guinea	Malta	Nicaragua	
Mozambique	Philippines	Moldova	Panama	
Namibia	Samoa	Monaco	Paraguay	
Niger				

Africa	Asia-Pacific	Europe	Latin America & Caribbean	Middle East & North Africa
Nigeria	Singapore	Montenegro	Peru	
Rwanda	Solomon Islands	Netherlands	Puerto Rico	
Sao Tome & Principe	South Korea	Norway	St. Kitts & Nevis	
Senegal	Sri Lanka	Poland	St. Lucia	
			St. Martin / Sint Maarten	
Seychelles	Taiwan	Portugal	St. Vincent & the Grenadines	
Sierra Leone	Thailand	Romania	Suriname	
Somalia	Timor-Leste	Russia	Trinidad & Tobago	
South Africa	Tonga	San Marino	Turks & Caicos Islands	
South Sudan	Vanuatu	Serbia	U.S. Virgin Islands	
Sudan	Vietnam	Slovakia	Uruguay	
Swaziland (Eswatini)		Slovenia	Venezuela	
Tanzania		Spain		
Togo		Sweden		
Uganda		Switzerland		
Zambia		Tajikistan		
Zimbabwe		Turkey		
		Turkmenistan		
		Ukraine		
		United Kingdom		
		Uzbekistan		

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