



Reality Bytes Tech's Turn to Resilience

Digitizing Democracy:

Ministry of Digital Affairs

Semiconductors & the Free World

Supplying Apple

2023 Business Climate Survey



攜手廠商 深耕未來

企業進軍海外最堅強後盾



融資



保證



輸出保險



轉融資

總行專線

總機：(02)2321-0511

授信：(02)2392-5235

輸出保險：(02)2394-8145

轉融資：(02)2397-1505

分行專線

高雄分行：(07)224-1921

臺中分行：(04)2322-5756

新竹分行：(03)658-8903

臺南分行：(06)593-8999

泰國曼谷代表人辦事處

捷克布拉格代表人辦事處

印尼雅加達代表人辦事處

+66-2-286-2896

+66-2-286-1038

+420-234-107222

+62-21-5268879



廣告



中國輸出入銀行

The Export-Import Bank of the Republic of China

強化貿易金融 協助對外貿易

<https://www.eximbank.com.tw>

MEDIATEK

America's Innovation Partner

Growth and Investment
in the United States
for More than
Two Decades



mediatek.com

Publisher 發行人
Andrew Wylegala 魏立安
Editor 編輯
Julia Bergström 尤麗雅
Art Director/ 美術主任/
Production Coordinator 後製統籌
Katia Chen 陳國梅
Cover Designer 封面設計
Dean Hsia 夏銘
Manager, Publications Sales & Marketing 廣告行銷經理
Caroline Lee 李佳紋
Senior Advisor 資深顧問
Don Shapiro 沙潯
Translation 翻譯
Liv Kao, Patrick Lien, Andrew Wang

高群雅, 連育德, 王先榮

American Chamber of Commerce in Taiwan
129 MinSheng East Road, Section 3,
7F, Suite 706, Taipei 10596, Taiwan
P.O. Box 17-277, Taipei, 10419 Taiwan
Tel: 2718-8226 Fax: 2718-8182
e-mail: amcham@amcham.com.tw
website: http://www.amcham.com.tw
名稱: 台灣美國商會工商雜誌
發行所: 台灣美國商會
臺北市10596民生東路三段129號七樓706室
電話: 2718-8226 傳真: 2718-8182

Taiwan Business TOPICS is a publication of the American Chamber of Commerce in Taiwan. Contents are independent of and do not necessarily reflect the views of the Officers, Board of Governors, Supervisors or members.
© Copyright 2023 by the American Chamber of Commerce in Taiwan. All rights reserved. Permission to reprint original material must be requested in writing from AmCham. Production done in-house. Printing by Farn Mei Printing Co., Ltd.

登記字號: 台結第一零九六九號
印刷所: 航美印刷股份有限公司
經銷商: 台灣英文雜誌社
台北市108台北市萬華區長沙街二段66號
發行日期: 中華民國一一二年二月
中華郵政台北字第5000號執照登記為雜誌文寄
ISSN 1818-1961

Chairperson: Vincent Shih
Standing Vice Chairperson: Andrea Wu
Vice Chairperson: John Lee
Treasurer: Steven Pan
Secretary: Cynthia Chyn

2023-2024 Governors: Anita Chen, Cynthia Chyn, Michael Huang, Dan Silver, Cellina Yeh.

2022-2023 Governors: Shelley Chia, Michael Chu, John Lee, Steven Pan, Vincent Shih, Andrea Wu.

2023 Supervisors: Claudio Longo, Miyuki Tanaka, Gwen Wang-Reeves.

COMMITTEES:
Agro-Chemical/ Kelly Chen; Asset Management/ Jimmy Chiu, Angela Yang, Derek Yung; Banking/ Vacant; Capital Markets/ Mandy Huang, Eric Jai, Stacy Lo; Chemical Manufacturers/ Charles Liang, Suresh Rajaraman; Cosmetics/ Abigail Lin; Defense/ Roger Yee, Scott Roberts; Digital Economy/ Anita Chen, Max Chen, Cynthia Chyn; Energy/ Randy Tsai; Human Resources/ Christine Chen, Cindy Chen, David Tsai; Infrastructure and Engineering/ Wayne Chin, Gwenth Wang-Reeves; Insurance/ Linda Tsou; Intellectual Property & Licensing/ Jason Chen, Wei Chi Chen, Peter Dernbach, Vincent Shih; Marketing & Distribution/ Paul Chen; Medical Devices/ Peter Chu, Louis Ko, Jeffrey Wang; Pharmaceutical/ Jae Yeon Choi, Miyuki Ogushi, Cellina Yeh; Private Equity/ Chris Cottorone, Echo Yeh; Public Health/ Pongo Peng, Gary Wong; Retail/ Cesar Chen, Peggy Liao; Semiconductor/ ST Liew, Terry Tsao, Rado Wang; Sustainable Development Goals/ Eva Lin, Cosmas Lu; Tax/ Heidi Liu, Cheli Liaw; Technology/ Erica Lai, Stella Lai, Angela Yu; Telecommunications & Media/ Mindy Lee, Angela Lin, Jo-Fan Yu; Transportation & Logistics/ Michael Chu, Carol Lin; Travel & Tourism/ Jason Yeh, Fiona Yuan.

CONTENTS

NEWS AND VIEWS



8 President's View

The Rabbit is Sprung
By Andrew Wylegala

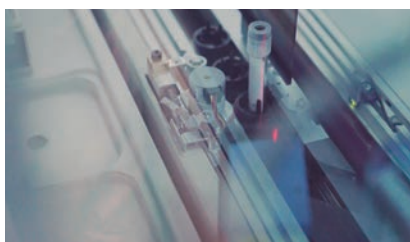
12 Editorial

Strengthening Bilateral Ties through the Taiwan Fellowship Act
《台灣獎學金法案》的通過將加強美台雙邊關係

13 Taiwan Briefs

By James Hill

ISSUES



17 The Chamber as Information Bridge

Keeping USTR informed regarding AmCham committee positions.
By Don Shapiro

18 Progress on 2022 White Paper Issues

COVER SECTION

Reality Bytes: Tech's Turn to Resilience

20 Amid Geopolitical Gale, Taiwan's Chipmakers Chart New Course

In light of rising tensions between China and the free world, resilience is becoming paramount, while a bifurcation of supply chains seems inevitable.
By Matthew Fulco



25 Connection With Public Vital to Moda's Success

The newly established and highly ambitious Ministry of Digital Affairs has great potential if it can heed the many challenges ahead.
By Jordyn Haime

27 As Apple Relies Less on China, Where Does that Leave its Taiwan Suppliers?

Taiwan continues to play a leading role in Apple's supply chain as the U.S. tech giant works to reduce overreliance on China manufacturing.
By Matthew Fulco

SPECIAL REPORT



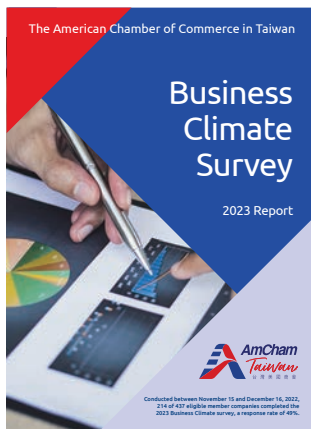
30 Rough Waters: Taiwanese Fishing Boats Reeling From Forced Labor Charges

Alleged mistreatment of migrant fishery workers and non-reporting of daily catches could lead to punishing U.S. and EU sanctions. But the issue is not Taiwan's alone to solve.
By Sean Scanlan

34 Time for Taiwan Studies

The growing research field of Taiwan studies approaches Taiwan as an entity in its own right rather than a subset of scholarship on China.

By Jules Quartly

37 AmCham Taiwan's 2023 Business Climate Survey**AMCHAM EVENT****54 Coming Together for Citizens' Health****EXECUTIVE SUITE****56 Meet Honoré Choukuegno of Mercedes-Benz**

By Julia Bergström

**SPONSORED CONTENT****6 Building Digital Resilience With Cloud for Digital Transformation****10 Otis Levels up Its Smart Services****COVER SPONSOR****Technology for Social Impact**

Microsoft is the worldwide leader in software, services, devices, and solutions that help people and business enterprises realize their full potential. At our core, Microsoft is the productivity and platform company for the mobile-first and cloud-first world. We reinvent productivity to empower every person and every organization on the planet to achieve more.

Microsoft Taiwan Corporation was established in 1989, and in the more than two decades since then, we have demonstrated our firm commitment to being a responsible local industry partner as well as perform our corporate social responsibility.

As a company, and for our employees as individuals, we value integrity, honesty, openness, personal excellence, constructive self-criticism, continual self-improvement, and mutual respect. We are committed to our customers and partners and have a passion for technology. We take on big challenges, and pride ourselves on seeing them through. We hold ourselves accountable to our customers, shareholders, partners, and employees by honoring our commitments, providing results, and striving for the highest quality.

Technology is a powerful force for improving people's lives. But right now, half the world does not have access to the benefits and opportunities that technology offers. Microsoft Philanthropies are committed to doing more globally to bring the benefits of technology to the people and organizations who need them most. Together with our grantees, partners and employees around the world, we're working to fulfill Microsoft's mission to serving the public good through innovative technologies and partnerships.

Building Digital Resilience with Cloud for Digital Transformation

Organizations have used digital transformation as an effective approach to improve their operational efficiency or innovative capacity, particularly since the outbreak of the Covid-19 pandemic. According to the International Data Corporation (IDC), global digital transformation spending is expected to reach US\$3.4 trillion in 2026. Meanwhile, because of escalating cyber-attacks, occurrences of natural or political disasters, and other unexpected events, organizations need to build digital resilience to make workloads function as expected and enable quick recovery from failures caused by these types of events. How to realize digital transformation and build digital resilience in the meantime is an important topic for an organization. The cloud technologies can contribute to an organization's digital resilience in the following aspects:

Agility

Instead of establishing a scalable IT infrastructure, more and more organizations pursuing digital transformation migrate to the cloud or adopt a cloud-native IT environment to achieve new kinds of agility. Per IDC's forecast, 74% of organizations in Taiwan will adopt cloud technologies by 2024. The feature of cloud services, on-demand delivery of IT resources, enables an organization to react agilely to the unexpected by scaling resources in real-time, reducing unplanned downtime, and ensuring user productivity through applications that are always available and up to date.



Customer Story

Axelspace Scales Data Pipeline from One to Five Satellites Seamlessly on AWS

From the beginning, Axelspace chose Amazon Web Services (AWS) as the cloud service provider for its custom, event-based scaling system using a combination of AWS services, including AWS Lambda, which gives companies the ability to run code without thinking about servers or clusters. By automating the provisioning of its infrastructure based on workloads, Axelspace instantly scaled its data-processing operations to support additional data from four new satellites while optimizing compute costs and running increasingly complex algorithms on its satellite data.

Resource: AWS website



For whole story

For example, the outbreak of the Covid-19 pandemic forced an organization to scale their IT infrastructure and storage up and down for adoption or deployment of remote working, remote conferencing, or remote learning models. On Amazon Web Services (AWS), organizations no longer need to predict future storage capacity as they are adapting to the pandemic-induced disruption by leveraging the operational agility and economic advantages of AWS's consumption-based model (Pay-as-you-go model).

Resilience

Accessing cloud services at the edge, even in the harshest conditions, helps organizations prepare for, respond to, and recover from natural or human-made disasters that may leave information and communication infrastructures damaged or destroyed. For example, in February 2022 deadly floods and landslides ravaged Petrópolis, a city in southeastern Brazil. With Amazon Elastic Compute Cloud (Amazon EC2), Amazon Simple Storage Service (Amazon S3), and AWS Snowball,

the Brazilian government combined the drone data of impacted land with decades of meteorological data to identify focal areas and focus their resources to provide timely support to those most in need.

The robust and resilient cloud infrastructure can allow its users to build resilient workload architectures thereon. For example, as of Jan 2023, AWS has spanned 96 Availability Zones within 30 geographic regions worldwide, which compose AWS's global infrastructure. All zones in an AWS Region are interconnected with high-bandwidth, low-latency networking, over fully redundant, dedicated metro fiber providing high-throughput, low-latency networking between zones. All traffic between zones is encrypted. The network performance is sufficient to accomplish synchronous replication between zones.

While an organization adopting cloud technologies has the flexibility of choosing how and where it wants to run its workloads, it still needs to have a comprehensive data security policy to ensure the availability of data for workload recovery or restoration purposes. Per lessons learned from the war in Ukraine, local data storage does not necessarily lead to improved data security. An organization first needs to determine the security category of data (such as sensitive and classified), as well as data security objectives, and assign the location of data, data backup policy, and other security and privacy controls accordingly.



Customer Story

Siemens Strengthens Security and Enhances Productivity Using AWS

Siemens decided to modernize its security infrastructure on Amazon Web Services (AWS). Using a suite of AWS services, including AWS Security Hub—a cloud security posture management service that performs security best practice checks, aggregates alerts, and facilitates automated remediation—the company's security team consolidated critical data on a centralized dashboard, automated notifications, and improved communication with the other teams it manages.

Resource: AWS website



For whole story

Security

An organization can build its security model according to the security pillar of AWS Well-Architected Framework, which details practices of identity and access management, detection, infrastructure protection, data protection, and incident response. Furthermore, an organization can utilize AWS tools to implement Zero Trust on the cloud.

An organization can utilize AWS tools to protect data, detect threats, response to incidents and so on. For

example, an organization can use AWS Identity and Access Management (IAM) service to grant execute permission of AWS Backup to perform the backup operation for specific restricted data. It can also use Amazon GuardDuty, an intelligent threat detection service using anomaly detection, behavioral models, and threat intelligence feeds from AWS and leading third-parties, to continuously monitor its AWS accounts and workloads to protect against malicious or unauthorized activities.

Because the agility, reliance, and

security of the cloud contribute to an organization's digital resilience, a cloud-driven digital transformation strategy ought to be encouraged. The relevant authorities may further develop guidelines to help government agencies and enterprises build digital resilience with the cloud for their digital transformation. Meanwhile, the incubation of cloud literacy and cybersecurity talents should be addressed because it is a trend of migrating workloads to the cloud or adopting cloud native IT environment.

數位轉型之旅：運用雲建立數位韌性

組織將數位轉型視為改善作業效率與創新動能的有效途徑，國際數據資訊公司(IDC)預測全球數位轉型投入於2026年將達3.4兆美元。又，因日增的資安攻擊及其他人為與非人為意外事件的發生，組織須建立數位韌性，可自意外事件造成的損害中快速復原。是以，如何實踐數位轉型並建立數位韌性將成重要課題。雲端科技具下列特性，可協助組織建立數位韌性。

敏捷

許多追求數位轉型者不自建或擴展IT基礎設施，開始移動到雲端或採取雲原生的IT環境，以追求更好的敏捷性。IDC預測至2024年時，台灣有74%的組織會採用雲端科技。雲端服務視需求提供IT資源的特性，使組織在遭受意外事件衝擊時，可即時地擴展資源、減少非預期的停機時間、隨時利用最新應用程式，以確保其生產力。

例如，組織因COVID-19疫情流行加速採用遠距工作、遠距會議、或遠距學習方式，故面臨擴展IT基礎設施與資料儲存量的議題。透過Amazon Web Services (AWS)依需求提供IT資源與依量計價的服務模式，組織無須事先預測資料儲存量，即可快速且經濟地應付因疫情流行而起的營運中斷風險。

穩健

可於極艱困環境下近用雲端服務，將有助於組織就可能造成資通訊基礎設施毀損之災難進行準備、因應與復原工作。例如，2022年2月發生的洪水和山坡地下滑對巴西南部的城市 — Petrópolis造成損害，透過Amazon Elastic Compute

Cloud (Amazon EC2)、Amazon Simple Storage Service (Amazon S3)與AWS Snowball，巴西政府結合無人機取得之受影響區域資料與數十年氣候資料，識別出主要區域，及時將資源集中提供予最有需求者。

穩健的雲端基礎設施可允許使用者在其上建立穩健的工作負載。例如，至2023年1月止，AWS雲端基礎設施包括在全球30個地理區域內的96個可用區域。所有地理區域內的可用區域都透過高頻寬、低延遲網路與專用都會光纖互連，且所有可用區域間的流量都是經過加密的，並可支持可用區域間的同步複製。

當組織採用雲端服務時，可彈性地選擇運行工作負載的方式和地點，但仍須建立完善的資料保護政策和措施，以確保工作負載復原所需資料的可用性。烏克蘭戰爭意味著資料在地儲存不必然等於資料安全。組織須先確認其資料保護等級與資料保護目標，再決定資料儲存地、資料備份作法、以及其他安全控制措施。

安全

組織可依循AWS Well-Architected Framework的安全性支柱，在雲上面建立

安全的工作負載。前揭安全性支柱提供和身份與存取管理、偵測、基礎設施保護、資料保護和事件回應有關的最佳實務。此外，組織可利用AWS工具在雲上面實踐零信任。

組織可利用AWS工具來保護資料、偵測威脅、回應事件等。舉例來說，組織可採用AWS Identity and Access Management(IAM)服務控制雲上面工作負載的存取，如：使用該服務授予AWS Backup的執行權限，以執行特定受管制資料之備份作業。此外，可透過運用來自AWS及領先的第三方異常偵測、行為建模和威脅情報摘要的智慧威脅偵測服務 — Amazon GuardDuty，持續地監控其AWS帳戶與工作負載是否有惡意活動。

因為雲的敏捷性、穩健性與安全性有助於組織建立數位韌性，故雲驅動的數位轉型策略宜受到鼓勵。有關主管機關或可考量發展相關指引，引導政府機關與企業善用雲端科技，實施數位轉型與建立數位韌性。同時，考量邁向雲端或雲原生的IT環境已漸成為主流，雲端素養與雲端資安全人才的培育亦應受到重視。

美國中情局如何下大賭注採用商業雲端技術來實現其使命

「這是我們做過的最具創新性的事情，對美國中央情報局和情報都產生了重大影響... 我絕不會說在網路世界中所做的任何事情都是所向披靡的、但這非常接近。這可能是最安全的事情了。」

— John G. Edwards
美國中央情報局資訊長

資料來源: AWS 官網



The Rabbit is Sprung

Soon after this issue is in your hands, I'll be landing in Washington, D.C., and returning a "window on Japan" to my life. By March I will have taken over stewardship of the National Association of Japan-America Societies (NAJAS), a developer of thought and exchange programs for 38 grassroots societies across North America that promote virtually all aspects of ties with Japan.

I am sorry to leave Taiwan somewhat abruptly – and amid a riveting chapter in our U.S.-Taiwan story. I had a remarkable 24 months with AmCham Taiwan. Thank you, 1,160+ member-volunteers, Chairpersons C.W. Chin and Vincent Shih, and Governors. Thank you, dream team of 14 office mates powering this Chamber. Thank you, also, Taiwan government and AIT partners and stakeholders. Now, let's warmly welcome back my one-time Commerce Department colleague, Amy Chang, who returns to the Chamber after a few years away to serve as Interim President until a permanent successor is brought aboard. True to my wordy nature, I sign off sharing milestones, work in progress, and hazard a few lookaheads.

Expanding Washington advocacy – with your help, we balanced a Taipei-heavy governmental dialogue and combined it with our Washington one, creating a three-party conversation. This in turn drew together our economic reform and commercial diversification and integration agendas. In my third month I wrote an opinion piece in *The Hill*, calling for an MOEA-USDOC investment initiative a half year before the very similar "Technology Trade & Investment Collaboration," or TTIC, came into being. A few months after that our Chairperson joined a TTIC program in Seattle on nextgen telecom, and our new Semiconductor Committee contributed to setting the TTIC agenda. How cool was that!

Next up? Having helped thaw five years of ice around the U.S.-Taiwan "TIFA talks," how can AmCham help maneuver Taiwan into the "IPEF" structure? Spur on digital economy and/or double tax avoidance talks? Find that elusive on-ramp to bilateral trade agreement negotiations? Gauge the trade-friendliness of Speaker McCarthy's Ways & Means Committee? Articulate the top five messages for delivery on next summer's Doorknock?

Keystone hires, while promoting internal talent, have strengthened your office team, better supported a membership that keeps growing at double digits, and re-energized programming. Our wage review and merit compensation updates will enhance matters, while clearer annual work plans and increased professional development investments will help retain this talent. We have an energetic team with flexible, creative approaches to problem-solving and emerging opportunities. *Next up?* What more can we do with member engagement to serve as a resource for internships or even initial job placements? Secure a "best-place-to-work" award?

After learning through our August "Post-Pelosi" flash survey that members wanted a focus on security, we've produced six "Spotlight on Resilience" webinars. Second, after accelerating the relaxation of Taiwan's Covid-related border restrictions by a good month, we've instituted the Visitors and Issues Program to access the resulting surge of travelers. Third, to support the Taiwan-to-U.S. FDI wave, we've been exploring a cross-business-culture training platform patterned on our successful NextGen program. *Next up?* Does the Chamber favor it? Which programs, if any, to wind down – and which to crank up?



Equipped with a new registration, logo, and brand, AmCham Taiwan is ready to network and attract members island-wide. **Next up?** How might we best work with AmCham Taichung and AmCham Southern Taiwan? How to instrumentalize mayoral lunches as growth vectors? A Board meeting in Tainan? What about regular programs in member prospect-rich Hsinchu?

Bolstered by 60 net new company members since 2021, including Taiwan capital MNCs, we are a stronger, more diverse Chamber. **Next up?** What size and shape do our leaders envision as optimal two, four, or six years down the road? What is the best revenue model and staff size to support those members? (AmChams have opted for service packages and a ratio of one staff to about 70 members.)

Setting up a Semiconductor Committee brought in a dozen multinational members and thrust our Chamber into the world's hottest discussions of industrial policy. **Next up?** How can we capitalize? What is the next exciting subcommittee expansion? Education? Entrepreneurship? Investment and/or Taiwan Outbound Investment? Should other committees be consolidated or sunset based on the new committee metrics?

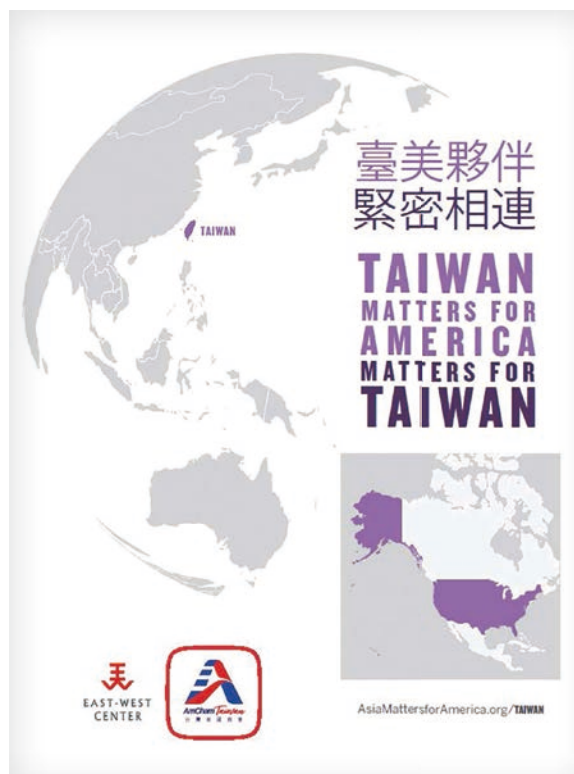
To amplify a past-President's strategic messaging, we've refreshed the look of TOPICS and Chamber website, expanded content swaps, and reached out to major media. In March we presented President Tsai Ing-wen the *Taiwan Matters for America* monograph. Last month we premiered podcasting with AIT Director Oudkirk. **Next up?** How do we optimize content and channels to spread positive, accurate messages about Taiwan commerce, continuing to debunk mis/disinformation, including the "most dangerous place" and "hollowing out" falsities?

In sum, I wrap up with sincere gratitude for my selection to join you two years ago, a rank-beginner in all things Taiwan, and the satisfaction at having achieved my three top objectives: to leverage my Foreign Service background to contribute to a blossoming economic dialogue with D.C., rebuild a team with top talent, and encourage that team to think outside the box, even as they nurtured marquee projects and traditions. I've developed a deep fondness for Taiwan and its super-hospitable people, so I will be pulling for the country at every turn, especially through the present unsettled period.

Until I see you in D.C. or on some U.S.-Taiwan-Japan webinar... thank you and *jia you*.



Andrew Wylegala
President,
American Chamber of Commerce in Taiwan



Otis Levels up Its Smart Services



©AIM Technologies Co.

From inventing the elevator with safety gear to creating seamless experiences using digital solutions, Otis is built on a 170-year-long legacy of innovation. The company has the largest service portfolio in its industry, moving over two billion people per day with a steady stream of solutions to modern societal problems.

As the Covid-19 pandemic accelerated digitalization across sectors, it also prompted the elevator industry to develop innovative solutions with holistic safety measures that mitigate both accidents and disease transmission. At the forefront of these innovations and the future of vertical transportation is the Otis ONE™ IoT solution.

This advanced system gathers data to anticipate potential malfunctions and service needs and proactively sends repair schedules to clients. Otis ONE™ is designed to be intelligent and adaptable,

representing Otis' vision for a seamless journey that is smooth, quiet, safe, durable, and energy efficient.

"Otis ONE™ has enabled us to provide customers with transparent insight into unit performance, which in turn improves service quality," says Ian Lau, managing director of Otis Taiwan. "The 24/7 real-time equipment health and performance monitoring means our field colleagues can solve issues proactively."

Operation data collected by Otis ONE™ is analyzed and made immediately and transparently available to customers and field technicians servicing the units, granting access to information about their entire portfolio's performance.

A complete solution is realized when Otis ONE™ and the company's Gen2® elevators are combined. With more than 1 million units sold, the Gen2® is Otis' best-selling elevator, thanks to its quiet, smooth ride, compact design, and energy-

efficient operation.

"The regenerative drive is a major factor for customers choosing Gen2® family of elevators," says Lau, adding that these features enable up to 75% reduced energy consumption. "We are also looking to bring forward even more 5G and IoT to improve products and services for our clients in Taiwan."

Building managers can already use Otis' API digital services to integrate data on elevator availability, maintenance needs, and traffic per floor into their building management system from the Otis developer portal. Being one step ahead of residents' needs lowers costs, helps manage customer expectations, and provides seamless experiences.

Safety, notes Lau, is at the core of the company's products and services. That is why Otis ONE™ empowers proactivity by identifying potential issues and resolving them before a service inter-

ruption occurs. However, Lau stresses that unexpected situations might still arise. As an example, he cites the nationwide power outages in 2022, which left hundreds of elevators standing still across Taiwan. In situations like this, passengers in elevators with Otis ONE™ can communicate directly with operators via the communication panels, enabling faster and safer solutions.

Another pressing issue faced by Taiwan is its transformation into a super-aged society by 2026, with at least 20% of the population aged 65 or above.

An aging demographic will make smart buildings and public transportation with inclusive mobility solutions even more vital to the health of society. Otis is part of tackling this issue by offering inclusive mobility solutions with IoT technologies for new buildings and improving the conditions of existing buildings.

These solutions allow not only humans but also robots to travel safely between floors. Lau notes that as robots are utilized more frequently in hospitality, healthcare, and other industries, smart and customizable solutions have become pivotal to the

smooth running of operations.

“One of our hotel clients uses robots to deliver goods to guests,” he says. “Using our technology, the robots can interact with hotel elevators via the cloud, allowing them to call the elevators, select their destination, enter and exit the car, and deliver goods to guests. The robots now handle around 40-50 on the regularly basis.” Looking toward the future, Lau says the company will continue to be an industry disruptor, utilizing its talent, long history, and culture of innovation to bring elevated experiences to customers. 瑪

奧的斯 智能服務進化升級

成立170年來不斷創新的奧的斯，發明了附有安全裝置的電梯，如今藉數位技術，實現流暢無縫的搭乘體驗。它擁有豐富齊全的產品及服務，每天運送超過20億人，源源不斷地解決現代社會的運輸問題。

疫情之下，各行各業數位化勢不可擋。電梯業界也以減少意外、防範疾病傳播為目標，推出結合全方位安全措施的創新產品、服務。引領創新、開啟垂直運輸未來前景的，正是奧的斯Otis ONE™ IoT物聯網解決方案。

這套先進系統能蒐集數據資料，預測潛在故障與服務需求，將維修時程主動通知客戶。Otis ONE™突顯出奧的斯致力為乘客打造的無縫旅程，相當順暢安靜、安全耐久且節能。

台灣奧的斯董事總經理劉欣向說：「Otis ONE™ 讓客戶清楚掌握各個電梯的使用效能，提昇了服務品質。全天候的設備健康與運行監測，讓現場同仁更能主動解決問題。」

Otis ONE™ 會彙整、分析電梯運行數據，即時、清晰地傳給客戶及現場維修技師，讓他們瞭解全體電梯設備效能如何。

Otis ONE™ 系統加上Gen2®電梯，是一套完整解決方案。Gen2®不僅安靜平穩，更省空間、省電，是奧的斯旗下最暢銷的電梯，銷量超過百萬部。

「很多客戶是為了實踐再生循環，選擇Gen2®系列電梯，」劉欣向說，Gen2®可以減少75%的耗電，「我們盼望整合多種5G、IoT技術，給台灣客戶更好的產品與服務。」

建築管理人員已能透過奧的斯API數位



服務，從開發者入口網頁，把各電梯使用狀態、維修需求、樓層客流等資料，整合到管理系統中。提早掌握住戶需求，可減少營運成本，符合客戶期待，創造無縫體驗。

劉強調，「安全」是奧的斯產品與服務的核心。Otis ONE™系統會辨識潛在問題，在服務受干擾前解決問題，主動地確保安全。當然，預料之外的情況難以避免，例如2022年全台停電，各地千百部電梯停擺。此時使用Otis ONE™系統電梯的乘客，就能用通訊面板與客服人員直接溝通，更快速、安全地排除障礙。

台灣將在2026年邁入65歲以上人口佔20%的「超高齡社會」。人口急速老化，使智能建築、更具包容性的公共運輸系統

更顯重要。奧的斯包含IoT科技的共融移動方案，既能強化新建築，也能彌補現有建築的不足，為人口老化議題獻力。

這些解決方案讓人與機器人都能在不同樓層間安全移動。劉欣向指出，在旅店、醫療等行業，智能及客製化解決方案的運用更為頻繁，已成為確保營運順利的關鍵。

「有飯店業客戶會用機器人運送物品給房客。我們的技術讓機器人存取雲端資訊，與電梯互動，可呼叫電梯、選擇目的地、進出電梯、送東西給房客，一天要執行約40~50個指令。」劉說，放眼未來，奧的斯仍會力求創新，提昇行業水準，要善用優秀人才、悠久歷史與創新文化，提供客戶絕佳體驗。 瑪

Strengthening Bilateral Ties Through the Taiwan Fellowship Act

The U.S. Congress in December passed legislation creating the long-awaited Taiwan Fellowship Program to deepen the relationship between the U.S. and Taiwan. Since the idea was first proposed more than a decade ago, AmCham Taiwan has been an enthusiastic supporter of the Program, which will enable the United States each year to send 10 federal government employees to come to Taiwan on a two-year fellowship that will include a year of service within a Taiwan government agency or NGO related to their area of expertise.

The initiative is modeled on the Mansfield Fellowship Program, run by the foundation set up in honor of former U.S. ambassador to Japan Mike Mansfield. Since its start in 1994, the Mansfield program has helped train several hundred American specialists in Japanese affairs, building a network of personal contacts between them and Japanese counterparts. It has been highly successful in helping bridge cultural gaps and enhance understanding between governmental agencies in the U.S. and Japan, facilitating cooperation in a host of fields that require bilateral collaboration.

By the same token, the opportunity created by the Taiwan Fellowship Act for U.S. civil servants to study Mandarin and gain experience serving in Taiwan offices will give the participants a range of knowledge about Taiwan and the connections with Taiwanese counterparts that will ease future working relations between the two sides.

AmCham Taiwan has long been an active advocate for the passage and funding of the TFA. In their last several annual *White Papers*, we have urged the U.S. Congress, the Biden Adminis-

tration, and the Tsai administration to support this important initiative. We have also written numerous letters to relevant parties, highlighting the benefits of the TFA and the need for its implementation.

Given the favorable step toward enhanced cooperation represented by the TFA, AmCham has a few suggestions to offer. First, we call on the Taiwan authorities to embrace the initiative by identifying suitable host agencies and working with the U.S. implementers of the program to establish the language training and other support mechanisms. Next, we urge the U.S. side to help with administrative support such that the program can field students as early as this year. Congress should ensure that this worthwhile program does not become an “unfunded mandate,” but rather is supported sufficiently.

But even full public finance may not prove sufficient to the needs and there is ample space for the private sector – including our AmCham members – to offer financial support to get the TFA up and running. Such learning and bonding would represent enlightened self-interest, as private sector actors will be among the primary beneficiaries of better harmonized regulation and public administration.

Finally, AmCham urges the Taiwan government to consider creating a program complementing the Taiwan Fellowship Act by sending an annual contingent of Taiwanese civil servants to gain experience in American government agencies of various kinds. Such a companion program funded by the Taiwanese side would be the natural next step in further deepening the relationship and level of understanding between the two sides. 璽

《台灣獎學金法案》的通過將加強美台雙邊關係

美國參議院去年 12 月通過了《2023 年國防授權法案》，其中包括期待已久的《台灣獎學金法案》(TFA)，這是一項對建立美國和台灣之間的信任至關重要的計劃。該法案的通過使美國能以為期兩年的獎學金派遣 10 名聯邦政府僱員在台灣居住，這讓台灣美國商會感到非常興奮。

這項重要的立法將為美國和台灣長期實施雙邊協議奠定成功的基礎，是促進相互理解和公共政策協調的關鍵一步。

這個讓美國公務員在台灣學習中文和工作的機會，將使他們以最直接的方式接觸台灣、台灣的文化和人民，並讓他們與台灣同行建立關係。

類似的計劃如美國和日本之間的《曼斯菲爾德獎學金計劃》，已被證明在彌合文化差異和增進政府機構之間的理解方面非常成功。《曼斯菲爾德獎學金計劃》幫助數百名美國日本事務專家與日本同行建立了個人人脈聯繫網絡，從而在工作層面實現了相互理解和協調。

通過獎學金獲得的熟悉度和知識將直接有助於快速解決美國商會解決的一些頑固問題白皮書，也將有助於在美國和台灣之間建立更穩定和持久的關係。

台灣美國商會長期以來一直積極倡導 TFA 的通過和資助。在他們過去的幾年中白皮書，我們已敦促美國國會、拜登政府和蔡英文政府支持這一重要倡議。我們還多次致函有關各方，強調TFA的好處和實施的必要性。

2022 年 12 月，商會有幸接待了 Ray Burghardt 大使和美國西太平洋研究金非政府組織的來訪，該非政府組織在 Richard Pearson 和 Ryan Shaffer 的領導下一直帶頭開展 TFA 工作。這是美國商會展示我們對 TFA 及其所有好處的支持的絕佳機會。

美國商會期待看到台灣當局熱烈歡迎美國政府機構的安置。我們還鼓勵會員考慮為該計劃提供財政支持，我們認為這是一項值得支持的事業。

最後，我們鼓勵台灣通過對美國政府機構實施互惠安置，繼續其台灣暖實力* (Taiwan can help) 的運動，進一步加強美台關係。此一項由台灣方面資助的對美政府機構互惠安置配套中，派遣台灣僱員前往美國將是這一倡議的自然衍生計畫，以進一步加深兩地之間的關係和了解。 璽

*Can help is referring to the slogan “Taiwan Can Help”, which was translated and promoted by the Minister of Digital Affairs of Taiwan Audrey Tang as 台灣暖實力。

- BY JAMES HILL -

MACROECONOMICS

TAIWAN ECONOMY
IN CONTRACTION

Preliminary government figures for the fourth quarter of 2022 show that gross domestic product fell 0.86% year-on-year (YoY), the sharpest drop since 2009.

Explaining the decline, the Directorate-General of Budget, Accounting and Statistics (DGBAS) noted that “pressure from inflation and interest rate hikes continued to suppress global demand, and the industrial chain continued to adjust inventories.” It also cited the ongoing pandemic in China, Taiwan’s largest trading partner.

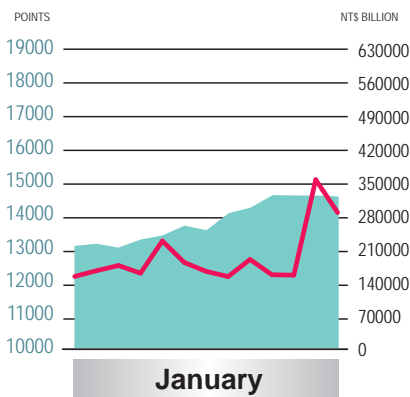
Exports fell 8.63% overall from the last quarter of 2021, with exports to China and Hong Kong falling by an even larger 15.6%. For the whole of 2022, DGBAS reported GDP growth of 2.43%, down from the previously projected 3.06%.

According to the Ministry of Economic Affairs (MOEA), the industrial production index in December fell for the fourth month in a row, declining 7.93% YoY. Nevertheless, the index saw a slight increase of 0.88% for the full year.

The manufacturing category, which

TAIWAN STOCK EXCHANGE
PERFORMANCE

THE LINE SHOWS CHANGES IN TRADE VALUE AND
THE SHADED AREA CHANGES IN THE TAIEX INDEX.



DATA SOURCE: TWSE

ECONOMIC INDICATORS

US\$ billion	Year earlier	
Current Account Balance (Q3 2022)	20.71	26.1
Foreign Trade Balance (Dec.)	4.8	5.7
New Export Orders (Dec.)	52.2	67.9
Foreign Exchange Reserves (end Dec.)	554.9	548
Unemployment (December)	3.61%	3.66%
Discount Rate (December)	1.750%	1.125%
Economic Growth Rate (Q3 2022)p	4.01%	4.14%
Annual Change in Industrial Output (December)p	-7.93%	8.69%
Annual Change in Industrial Output (Jan.-Dec.)	0.88%	13.42%
Annual Change in Consumer Price Index (Dec.)	2.71%	2.63%
Annual Change in Consumer Price Index (Jan.-Dec.)	2.95%	1.97%

P=PRELIMINARY

SOURCES: MOEA, DGBAS, CBC, BOFT

accounts for 93% of the industrial production index, recorded a decrease of 8.4% in December due to slowed activity in the flat-panel, chemical materials, metal, and machinery sectors, the Ministry added.

Despite the contraction and drop in exports, the domestic retail and hospital-ity sectors saw a rebound, the National Development Council (NDC) said. Retail sales rose 9.4% YoY in December, according to MOEA, which added that the sector recorded full-year sales of NT\$4.28 trillion (US\$140 billion) for 2022. December’s sales growth was driven by year-end promotions, purchases of goods and gift boxes for the Lunar New Year holiday, and sales of thermal products due to cold weather.

Another bright spot in the economy in 2022 was exports of semiconductors, which increased for the seventh consecutive year, according to Ministry of Finance data. Taiwan’s chip exports grew over 18% YoY, with industry leader TSMC accounting for over 50% of the global foundry market. Economists at Barclays said that although TSMC was building plants abroad, most notably in Arizona, Taiwan will still account for the bulk of its production, including its most advanced chips.

COST OF LIVING
ERODES WAGE GAINS

Average real wage growth was eroded by inflation during the first 11 months of 2022, according to DGBAS data. Before adjustment for inflation, the average nominal wage in January-November stood at NT\$44,371 (US\$1,457), up 2.86% from the year before.

When taking inflation into account, real wages fell 0.11% YoY to NT\$41,345, a steeper drop than the one experienced in 2021. DGBAS noted that Taiwan’s consumer price index (CPI) had stood at over 2% for much of 2021, exceeded 3% in March 2022, and remained at that level for several months.

Soaring prices of food, rent, and fuel have caused CPI growth to rise to 2.95%, the highest level in 14 years. Food prices were up 5.66%, rent by 1.68%, and fuel by 2.04% in 2022, the DGBAS said.

INTERNATIONAL

U.S.-TAIWAN TRADE
TALKS CONTINUE

The United States and Taiwan concluded the second round of trade talks in Taipei between January 14 and

17 as part of the U.S.-Taiwan Initiative on 21st-Century Trade negotiation framework. Taiwan's Office of Trade Negotiations expressed hope that an early harvest list can be agreed upon soon.

In a statement, the U.S. Trade Representative (USTR) said that both sides had "reached consensus in a number of areas and pledged to maintain an ambitious negotiating schedule in the months ahead to continue this momentum."

The U.S.-Taiwan Initiative on 21st-Century Trade was unveiled in June 2022 and covers such areas as trade facilitation, anti-corruption measures, small and medium-sized enterprises, good regulatory practices, and environmental protection. The U.S. is Taiwan's second-largest trade partner, accounting for 12.6% of total trade in 2021.

KEVIN MCCARTHY ELECTED HOUSE SPEAKER

Kevin McCarthy, a Republican representative from California, was elected Speaker of the House of Representatives after 15 ballot rounds, the longest process to elect a House Speaker since 1923. McCarthy had previously said that if elected Speaker, he would visit Taiwan. No such trip is currently planned, however. The visit last August of his predecessor, Democrat Nancy Pelosi, sparked a vehement reaction from Beijing, including the conducting of mili-

tary exercises in the seas near Taiwan.

FORMER TAIWAN VP VISITS VATICAN

Former Vice President Chen Chien-jen on January 5 attended the funeral of Pope Emeritus Benedict XVI in St. Peter's Basilica in Rome, Italy. In his capacity as President Tsai's special envoy, Chen met with the Holy See's Substitute for the Secretariat of State, Edgar Peña Parra, Secretary for Relations with States Paul Richard Gallagher, and Head of Protocol Joseph Murphy, and sat alongside heads of states from several countries. The Holy See is Taiwan's only remaining diplomatic ally in Europe.

CROSS-STRAIT

CHINA REOPENS ITS BORDERS

China reopened its borders on January 8 to most travelers after nearly three years of strict Covid-related restrictions. The world's second-largest economy had one of the most stringent Covid regimes, with frequent lockdowns, extensive testing, and quarantine requirements. The reopening comes after widespread citizen protests against China's zero-Covid policy in December.

Several countries, including South Korea, Japan, the United States, and Taiwan, responded by announcing enhanced testing measures for travelers

from China. Taiwan will collect saliva samples from those entering from China, with travelers testing positive required to undergo five days of quarantine. China has retaliated against South Korea and Japan's decision to test travelers from China on entry by refusing to issue visas to South Korean and Japanese nationals.

DOMESTIC

VP LAI ELECTED DPP LEADER

Vice President Lai Ching-te on January 15 was elected leader of the ruling Democratic Progressive Party (DPP). Lai ran unopposed after President Tsai resigned to take responsibility for the party's poor showing in November's local elections. Lai is widely expected to be the party's nominee for the presidential elections in January 2024, when Tsai is ineligible to run.

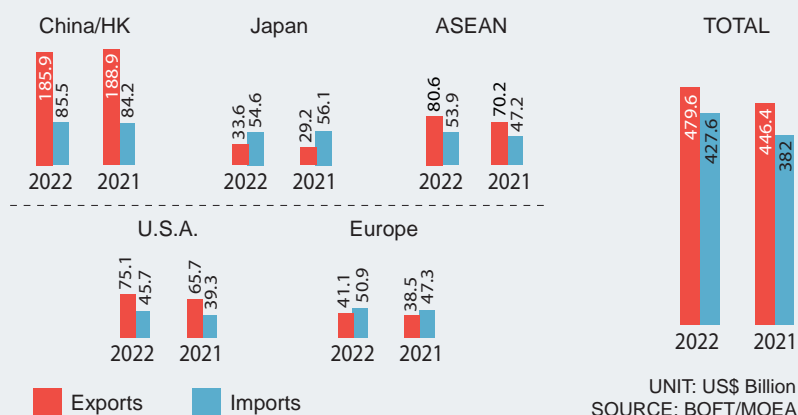
Presiding over the DPP's Central Standing Committee's meeting for the first time on February 1, Lai outlined three key priorities for the party: to provide full support for new Premier Chen Chien-jen and members of his new Cabinet (see below), to campaign for DPP candidate Tsai Pei-hui in a Nantou County legislative by-election, and to "safeguard Taiwan, enhance Taiwan's democracy, and strive for peace and prosperity."

NEW CABINET SWORN IN

President Tsai Ing-wen on January 27 appointed former Vice President Chen Chien-jen as Premier as part of a Cabinet reshuffle. Former Taoyuan Mayor Cheng Wen-tsan was appointed Vice Premier. The appointments followed the resignation of former Premier Su Tseng-chang and his Cabinet the week before.

Among the new appointments, professor and researcher Roy Lee was named a deputy minister of foreign affairs, environmental engineering professor Wang Ya-fen was appointed deputy minister of the Environmental Protection Administration, and former

TAIWAN'S JAN. - DEC. 2022 TRADE FIGURES
(YEAR-ON-YEAR COMPARISON)





Chen Chien-jen served as vice president during President Tsai's first term in office (2016-2020) and is now the leader of Taiwan's Cabinet.

PHOTO: CNA

DPP lawmaker Lee Chun-yi will serve as deputy minister of labor.

Retaining their positions are Minister of Economic Affairs Wang Mei-hua, Minister of Labor Hsu Ming-chun, Financial Supervisory Commission chair Huang Tien-mu, and NDC Minister Kung Ming-hsin, while former deputy Minister of Finance Chuang Tsui-yun will become the MOF minister.

In another change, Lin Chia-lung, a former Mayor of Taichung and Minister of Transportation and Communications, was named Secretary-General of the Presidential Office, replacing David Tawei Lee.

Chen, who pledged to strengthen Taiwan's economy, environment, and resilience, was sworn into office along with the new Cabinet and Presidential Office appointments on January 31 in a ceremony presided over by President Tsai Ing-wen at the Presidential Office.

TAIWAN PASSES NET ZERO LEGISLATION

Taiwan's Legislative Yuan on January 10 passed the Climate Change Response Act, which sets a goal of net zero emissions by 2050. The law also establishes a carbon tax mechanism for the nation's

largest emitters.

The bill calls for a review every four years, with most responsibility falling on local governments to reduce emissions within their jurisdiction. The carbon tax system, meanwhile, will likely take effect from the beginning of 2024 and impose fees on an estimated 287 companies with annual carbon dioxide emissions of at least 25,000 tons. Money raised from the tax will be spent on carbon reduction technology.

Several other countries, including Japan, South Korea, Canada, and the UK, as well as the EU, have already legislated net zero targets for 2050 or earlier.

CECC MULLS COVID DOWNGRADE

The Central Epidemic Command Center (CECC) announced on February 1 that Covid-19 might be downgraded on the notifiable communicable disease scale in May or June. The announcement follows the World Health Organization's statement that the Covid-19 pandemic remains a public health emergency of international concern, but its status may be revised during a meeting in late April.

Japan has already stated that it may downgrade Covid-19 to the same classification as seasonal flu, and the U.S. White House announced that President Joe Biden would end Covid-19 emer-

gency declarations on May 11.

In light of these developments, the CECC announced it would ease testing requirements for international arrivals and people under self-disease-prevention orders. These individuals will only need to take a rapid test if they develop symptoms, with the number of free test kits reduced to one.

The CECC's announcement represents a positive step toward the eventual control of the Covid-19 pandemic and a return to normalcy.

BUSINESS

AIRLINES ADD MORE FLIGHTS

The aviation industry in Taiwan displayed signs of recovery after nearly three years of pandemic-related travel restrictions by announcing a plethora of new routes and special offers to entice travelers back to the skies.

Low-cost airline Tigerair Taiwan plans to resume flights to Okayama, Ibaraki, and Sendai in Japan by the end of March, saying that discount fares would start at NT\$1,699 (US\$56) one-way. Meanwhile, Taiwanese flag carrier China Airlines plans to launch new direct flights to Chiang Mai, Thailand, and add or resume flights to London, Rome, and Vienna.



Taoyuan International Airport saw a revival in passenger numbers during the Lunar New Year holiday.

EVA Airways and StarLux Airlines, Taiwan's two other major international airlines, also plan to increase flights to Southeast Asia, North America, and Europe. Arrival numbers at Taiwan's main gateway, Taoyuan International Airport, continue to rise, recording over 70,000 arrivals in one day in January, the highest since borders reopened in October 2022. Total passenger numbers for 2022 were 3,758,417, well below the pre-Covid record of 48,689,372 set in 2019.

IPOS EXPECTED TO RISE IN 2023

Consultancy firm Deloitte and Touche estimates that the number of initial public offerings (IPOs) in Taiwan would rise modestly, from 47 last year to 50 this year, led by semiconductor, renewable energy, and biotechnology firms. Despite economic headwinds, the firm predicts IPOs will increase in the year's second half as capital markets improve.

According to Deloitte, concerns over inflation, monetary tightening, geopolitical disruption, and carbon emission reductions will likely continue to influence the market negatively, but inventory corrections completed in the second quarter of 2023 should mean a recovery in demand for goods and services will follow.

TAIWAN DROPS IN INVESTMENT RANKING

The latest report from U.S.-based Business Environment Risk Intelligence (BERI) has ranked Taiwan 14th in the world for investment, down eight places from last year. The report, released in December, cited cross-strait tensions as the primary reason for the drop. In Asia, Taiwan came in fifth place behind China, South Korea, Singapore, and Indonesia.

Taiwan's Ministry of Foreign Affairs said that Taiwan remains a popular destination for foreign investors as a critical piece in the global semiconductor supply chain. The Ministry added that rising political tensions did not deter investments, citing Investment Commission data showing approved foreign direct



U.S. delegates entering the Office of Trade Negotiations for talks under the U.S.-Taiwan Initiative on 21st-Century Trade framework.

PHOTO:CNA

investment increased 85% in the first eleven months of 2022.

EMPLOYEES EYE NEW YEAR JOBS

Over 90% of Taiwan employees surveyed by online job bank Yes123 were considering changing jobs after the Lunar New Year, the highest percentage in 14 years. Disappointing pay, poor industry outlook, and unfavorable promotion prospects were the main reasons cited.

More than half (61%) cited low pay as the primary reason for searching for new opportunities, followed by poor industry outlook at 44% and lack of promotion opportunities at 43%. Many workers in Taiwan traditionally look to change jobs after the Lunar New Year, when companies pay out generous year-end bonuses. The Lunar New Year fell on January 22 this year.

Respondents listed TSMC, Evergreen Group, Taiwan High Speed Rail Corp, and Cathay Financial Holdings as some of the most desirable companies to work for.

TSMC FORECASTS DROP IN SALES

Taiwan Semiconductor Manufacturing Co. (TSMC) said that it expects first-quarter sales to drop 14% from the previous year. The prediction followed

consolidations of inventory in the global IC industry. The world's largest semiconductor manufacturer predicts January-March sales to fall by between US\$16.7 billion and US\$17.5 billion.

The company also reported high sales figures for the last quarter of 2022, which helped its net profit to exceed NT\$1 trillion for the first time in its history.

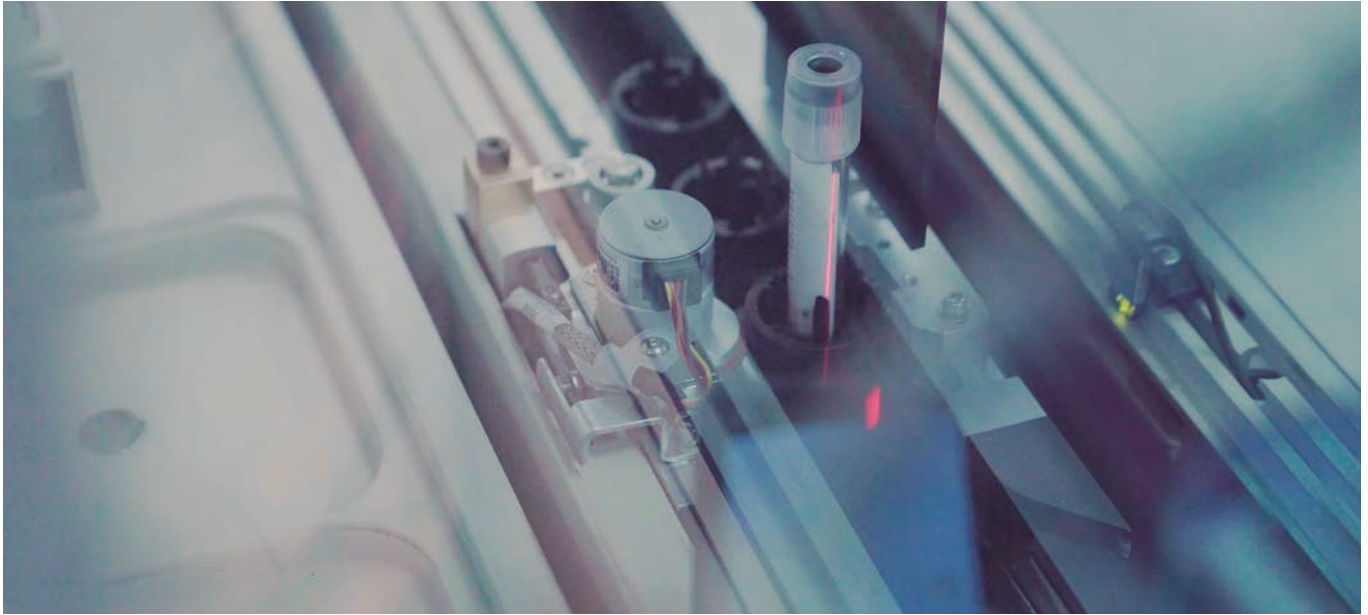
JAPAN BECOMES TAIWAN'S BIGGEST FRUIT IMPORTER

Japan now imports more Taiwanese fruit than any other country, overtaking China in 2022. Exports to Japan rose 11% YoY to US\$850 million, accounting for 46% of total exports. Prior to a 2021 ban by China on Taiwanese pineapples, sugar apples, and other fruits, the Chinese market was worth 80% of total fruit exports. Last year China accounted for 1.6% of exports.

After China announced its ban on the fruit in March 2021, Taiwanese pineapples gained a welcome boost from former Japanese prime minister Shinzo Abe, who shared a photo of himself posing with a box. The largest export market for Taiwan's agricultural products in 2022 was the United States at US\$4.6 billion, followed by Japan at US\$1 billion. ■

The Chamber as Information Bridge

Keeping USTR informed regarding AmCham committee positions.



One of AmCham Taiwan's major roles is to help communicate Chamber members' views – through their respective industry committees – to the relevant authorities in both the Taiwan and U.S. governments. That responsibility is carried out not only by means of the annual *Taiwan White Paper*, but also via other communications channels throughout the year. After a recent video conference with the Office of the U.S. Trade Representative, AmCham last month responded to a USTR request by providing additional information on the following topics:

Medical devices

Together with AdvaMed, the U.S.-based association for advanced medical technologies, AmCham's Medical Devices Committee has called attention to difficulties arising from the current policy of Taiwan's National Health Insurance Administration (NHIA) of steadily shifting self-pay items to the insurance reimbursement schedule without adequate industry consultation. To receive a self-pay code, a new and innovative medical device frequently must first obtain approval for a new medical procedure. The whole process can take three to five years to complete, by which time the product may be nearly obsolete considering the rapid technological changes in the medical device market.

In addition, manufacturers often find that the reimbursement price eventually being offered is unacceptably low. While a premium price is theoretically available for innovative products, companies have no practical opportunity to make the case that their product meets the criteria. The recommended solution is commitment by Taiwan to follow Good Regulatory Practices

principles like those set out in the U.S.-Mexico-Canada trade agreement of 2018. Those principles call for regular dialogue between industry and regulators on vital issues. In the absence of a final resolution, AdvaMed and the AmCham Medical Devices Committee further suggest that NHIA issue temporary self-pay codes to facilitate the entry of innovative medical devices into the market.

Pharmaceuticals

The two issues raised by the Pharmaceutical Committee also concern regulatory practices related to procedures for reimbursing hospitals and other healthcare providers. The first involves what are called Managed Entry Agreements (MEAs) – agreements between NHIA and pharmaceutical companies that are designed to share the financial risks of bringing new drugs into the market to meet patient needs. As with medical devices, the lack of adequate consultation is a central issue. The Committee contends that when it comes time to renew or terminate an agreement, NHIA sets the terms unilaterally. Also worrisome to industry is the lack of guarantees protecting confidential price information from being released.

The second issue concerns the Health Technology Reassessment (HTR) process to evaluate the clinical, social, ethical, and economic implications of selected health technologies. Given the lack of clear rules on how HTR is implemented, the Committee cites examples of its misuse for adjusting drug prices, changing the scope of reimbursement, or delisting certain drugs. As a remedy, it urges adherence to established international mechanisms.

Agro-Chemicals

The Committee's submission refers to Taiwan government efforts to review its regulatory policies in light of new gene-editing technologies that have created new plant varieties. The Taiwan Food and Drug Administration (TFDA) in recent years has launched a series of projects to study the matter, but to date there has been no definite conclusion. Besides the lack of clarity, there is concern about the potential impact of one proposal: to create a new food category to incorporate such gene-edited variations. "That would inevitably lead to trade disruptions due to asymmetric regulations with Taiwan's trading partners, considering that gene-edited products are indistinguishable from conventional ones," the Committee notes.

Chiropractic

The AmCham members of the Taiwan Society of Chiropractic Doctors stress that their subject of concern – Taiwan's deviation from international practice in failing to accommodate chiropractic as a recognized form of treatment – is now the oldest unresolved *White Paper* issue, going back over a decade. The chiropractic doctors practicing in Taiwan are mainly U.S.-trained and U.S.-licensed, but need to function in Taiwan in a state of legal limbo without even being able to operate a website.

Potential progress in addressing the issue with the help of the National Development Council was disrupted by the advent of the Covid-19 pandemic. The chiropractic AmCham members now hope that the matter could be taken up under the Good Regulatory Practices framework of the 21st Century Initiative currently being negotiated between Taiwan and the U.S.

— By Don Shapiro

Progress on 2022 *White Paper* Issues

AmCham Taiwan committees are currently starting to consider their proposals for inclusion in the 2023 *Taiwan White Paper* to be released in June. With a few months to go in the current advocacy cycle, a few committees have already reported successful resolution of issues from the 2022 volume:

Agro-Chemicals

The Taiwan Food and Drug Administration (TFDA) has agreed to hold pesticide-registration review meetings on a quarterly basis. In the *White Paper*, the Committee pointed to the difficulties caused by the uncertain review schedule, with a typical delay of between six months and a year between completion of a technical evaluation and review by the Pesticide Advisory Committee.

Retail

TFDA also agreed to revise the "Regulations Governing Nutrition Claims on Packaged Food" to reflect recent technological developments. As the Committee noted in the *White Paper*, "Advancements

in food technology have made it possible for healthful nutrients such as vitamins, minerals, protein, and others to be incorporated into snack-style food products that can help increase the nutrient intake of children and those with low appetite due to diseases or other physical conditions." But until now, manufacturers were restricted from making claims about the nutritional content of such products.

Transportation and Logistics

The Committee asked in the *White Paper* for an improved import environment for companies that have been certified as Authorized Economic Operators (AEOs), including according them expedited determination of Harmonized System codes. The Customs Administration agreed in a meeting with Committee representatives to establish a window to deal with this issue.

Other committees, such as Banking and Capital Markets, have reported encouraging progress toward resolution of one or more of their issues.

"We appreciate the attention that



various regulatory bodies have given to our *White Paper* issues, as well as the coordination role of the National Development Council, and we are gratified that a few issues have already been resolved," says AmCham Taiwan President Andrew Wylegala. "We hope that considerably more progress can be made for the sake of further boosting Taiwan's business competitiveness during this challenging period. Taiwan's adoption of quarterly reviews of pesticide registrations, moreover, is the type of Good Regulatory Practice under negotiation in the U.S.-Taiwan 21st Century Initiative, which bodes well for rapid progress under that important bilateral engagement."

— By Don Shapiro



Reality Bytes Tech's Turn to Resilience

Amid Geopolitical Gale, Taiwan's Chipmakers Chart New Course

BY MATTHEW FULCO

In light of rising tensions between China and the free world, resilience is becoming paramount, while a bifurcation of supply chains seems inevitable.

Eyebrows were raised in December when Taiwan Semiconductor Manufacturing Co. (TSMC) founder Morris Chang, speaking at the opening ceremony of the chipmaking giant's Arizona fab, remarked that “free trade is almost dead and globalization is almost dead.” He added that “a lot of people still wish they would come back, but I don't think they will be back.”

Chang's comments appear to reflect that geopolitical tensions between China and the world's democracies, with the United States at the forefront, are now a major influence on how the world's semiconductor supply chains are organized. This change matters enormously for TSMC, the world's largest contract chipmaker, and for Taiwan overall.

Accounting for 64% of global foundry

revenue, Taiwan is the world's top chip manufacturer, according to Taipei-based research firm TrendForce. Taiwan also accounts for 27% of IC design revenue and 20% of packaging and testing revenue – second and first, respectively, in the world.

The rising impact of geopolitics on the industry has been swift. Less than a decade ago, leading international chipmakers barely gave any thought to the national security implications of close cooperation with China and its ruling Chinese Communist Party (CCP). Today, intense great-power competition between the U.S. and China requires them to adjust their business strategies to reduce their China exposure or risk falling afoul of American law.

Since the U.S.-China trade dispute

began in 2018, Washington has imposed a series of ever-harsher sanctions on China's semiconductor industry. These measures aim to stymie Beijing's unflagging military buildup and quest to dominate crucial next-generation technologies.

“The belated realization that TSMC was dominating the manufacturing of the most advanced chips, to the tune of around 90% or more on any given day, finally got the attention of national security agencies in the U.S.,” says Paul Triolo, senior vice president for China and technology policy lead at the Albright Stonebridge Group, an advisory firm.

But, Triolo adds, this new development happened “only in the context of deteriorating U.S.-China relations” and the late realization that unification of China and Taiwan, peaceful or not, now seemed to

地緣政治颶逆風，台灣晶片廠開闢新路

撰文／傅長壽

去年12月，晶圓代工龍頭台積電的美國亞利桑那州新廠舉行機台進廠典禮，創辦人張忠謀出席致詞，指出「全球化與自由貿易幾乎已死」，引發各界關注。他進一步說：「許多人還是希望回到過去，但我覺得不太可能。」

這番話或可反映出地緣政治現況，亦即，中國與全球民主國家的關係緊張（美中關係尤其如此），如今已對全球半導體供應鏈的組成造成深遠影響。對身為全球最大晶圓代工廠的台積電、乃至於台灣而言，這個轉變牽一髮而動全身。

根據總部位於台北的集邦科技，身為全球晶片製造第一重鎮的台灣，占全球晶圓代工營收的64%，亦占IC設計營收的27%與封測營收的20%，分別名列全球第二與第一。

地緣政治對半導體產業的影響不但增加，也來得迅速。短

隨著中國與自由世界國家的緊繃關係加劇，半導體產業的韌性愈來愈重要，而供應鏈的分歧現象恐怕已是大勢所趨。

短不到10年前，全球頂尖晶片廠無不與中國和中共政府密切合作，很少考慮到相關國安議題。如今，美國與中國兩大強權的競爭激烈，晶片廠不得不調整營運策略，降低在中國的布局，以免動輒觸犯美國法規。

自美中在2018年爆發貿易戰以來，美國對中國半導體產業祭出一連串嚴峻制裁，旨在壓制中國全力拓展軍力與主導次世代關鍵技術的企圖心。

「美國國安單位終於發現，先進晶片製造由台積電所主宰，約占九成以上。」顧問公司歐布萊特石橋集團（Albright Stonebridge Group）的中國與科技政策事物資深副總裁崔歐洛（Paul Triolo）說。

但他補充，之所以發展成當前局勢，「完全是因為美中關係惡化」，以及相關單位後來才意識到，無論是武統或和統，中

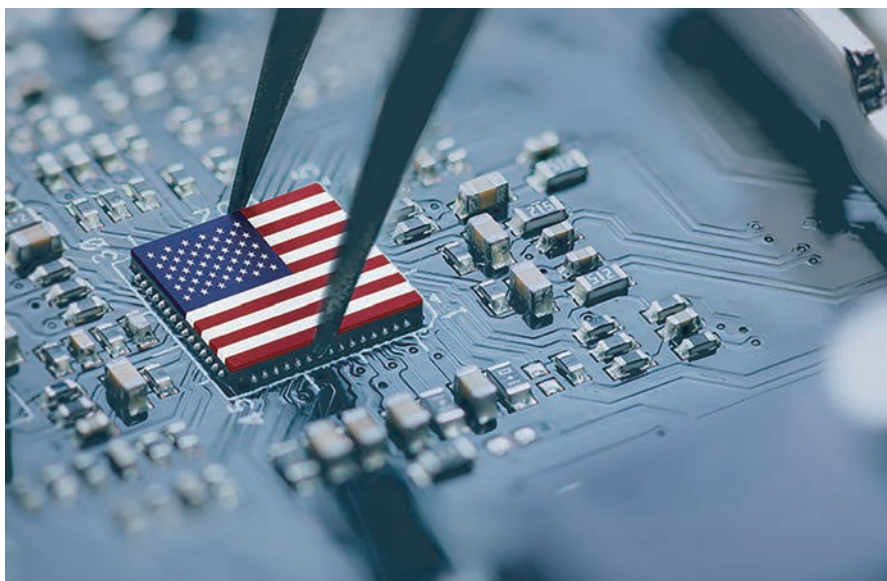
be a possibility.

In the short run, the U.S. bid to kneecap China's semiconductor industry will hit TSMC's bottom line, given its many Chinese customers. TSMC reportedly stopped making AI chips for Chinese startup Biren in October while the Taiwanese chipmaker reviewed U.S. regulations. Biren's products are believed to outperform Nvidia A100 chips, which the U.S. has now banned from being sold to the Chinese market.

Some analysts reckon that the U.S.-China tech race could also adversely affect Taiwan's IC makers in the long run. Joanne Chiao, an analyst at TrendForce, says the bifurcation of semiconductor supply chains will increase operating costs for foundries worldwide.

"This means that every foundry will be facing increasing pressure related to pricing regardless of where they put their fabs," she says. At the same time, with the construction of new fabs in the U.S., Japan, Singapore, and possibly Europe, "Taiwan's importance as the world's main chip production base will diminish somewhat over time because of the deglobalization trend."

Just how much it will diminish is the subject of heated debate, with Chinese outlets accusing the U.S. of hollowing out Taiwan's semiconductor indus-



try. The Communist Party tabloid *Global Times* said in December that TSMC "is turning into 'USSMC.'" Similar accusations were also made by Taiwanese media and opposition party KMT lawmakers, who accused the government of "gifting" TSMC to the U.S.

The Tsai administration has refuted that claim. "There is no such issue as 'de-Taiwanization' of our semiconductor industry," Foreign Minister Joseph Wu said in December. He added that Taiwan's industry is "very strong" and can't be replaced by other countries. "This is a

demonstration of our industrial strength, as we are expanding into other markets," he said.

J. Travis Mosier, an independent semiconductor analyst and former senior official at the Department of Commerce, says Taiwan can be expected to keep its most advanced technology at home and thus "safeguard the crown jewels." However, by cooperating with key allies and partners to build new manufacturing facilities outside of Taiwan, it can garner considerable goodwill and support while raising its international profile.

國與台灣如今似乎有統一的可能。

考量台積電的中國客戶眾多，美國箝制中國半導體產業之舉，短期恐怕會擠壓台積電獲利。據報導，台積電去年10月已暫停為中國新創企業壁仞智能科技生產人工智慧晶片，同時評估美國法規。壁仞產品的性能據信優於輝達A100晶片，後者目前已被美國禁止銷售到中國市場。

有些分析師認為，美中科技角力長期亦可能衝擊台灣晶片廠。集邦科技分析師喬安指出，半導體供應鏈分歧發展，將加深全球晶圓代工廠的營運成本。

「也就是說，不管代工廠在哪裡設廠，價格壓力只會愈來愈沉重。」她說。此外，隨著美國、日本、新加坡陸續興建新廠（歐洲亦有可能），「去全球化趨勢抬頭，台灣身為全球晶片生產重鎮的地位將隨時間降低。」

式微程度是多寡，引發各界激辯，中國媒體指控美國掏空台灣半導體產業。中共黨媒《環球時報》去年12月指稱，台積電正在變成「美積電」。台灣媒體與在野黨國民黨的立委亦提出類似指控，說政府把台積電「送給」美國。

蔡英文政府駁斥這項說法。外交部長吳釗燮去年12月表示：「我們的半導體沒有『去台化』的疑慮。」他補充說，台灣工業實力「非常堅強」，不會被其他國家取代，「這是台灣工業實力對外的擴展。」

曾為美國商務部資深官員、現為獨立半導體分析師的莫吉爾（J. Travis Mosier）說，台灣預計會將高階製程技術留在國內，「保住王牌」。然而，台灣若能與重要盟友和夥伴合作，在國外建廠，不僅能獲得對方的善意與支持，亦能提升國際能见度。

「台積電是台灣科技外交的先鋒。」莫吉爾說。

紮下新根

美國亞利桑那州是台積電拓展海外版圖的前哨站，計畫斥資400億美元興建兩座新廠，成為該州史上規模最大的外來直接投資案。一期工程預計在2024年投產5奈米家族製程，二期工程則預計在2026年開始生產3奈米製程。

根據台積電12月新聞稿，兩廠預計創造兩萬個工作機會，營建與高薪高科技工作各占一半。新廠未來每年合計生產逾60萬片晶圓，終端市場價值超過400億美元。

台積電赴美擴產，背後自有強烈的商業誘因。半公家機關資策會產業情報研究所資深產業分析師鄭凱安說，台積電逾六成營收來自於北美客戶，包括IC設計大廠如AMD、Apple、博通（Broadcom）、輝達（Nvidia）、高通（Qualcomm）等。

「在美成立先進製程廠，更有便於品牌客戶直接進行試驗與

“TSMC is the tip of the spear for Taiwan’s techno-diplomacy,” says Mosier.

Putting down new roots

Arizona is ground zero for TSMC’s global expansion drive. The company is spending US\$40 billion to build two fabs there, making it the largest foreign direct investment in the state’s history. The first plant is scheduled to begin producing

chips with its N5 family of manufacturing processes in 2024, while the second is expected to start producing chips on its 3-nanometer process technology in 2026.

The two fabs are expected to create 20,000 jobs divided equally between construction and high-paid tech positions, according to a TSMC press release in December. The fabs will manufacture more than 600,000 wafers annually, with an approximate end-product value

exceeding US\$40 billion.

There are compelling commercial reasons for TSMC’s U.S. expansion. More than 60% of the company’s revenue comes from North American customers, including major IC design companies such as AMD, Apple, Broadcom, NVIDIA, and Qualcomm, notes Cheng Kai-an, a senior industry analyst at the semi-governmental Market Intelligence & Consulting Institute (MIC).



製程優化，加速晶片研發過程。」他說。

「地利之便對客戶很重要。」美台商業協會會長韓儒伯（Rupert Hammond-Chambers）說，客戶「愈來愈要求縮短供應鏈。這樣的要求很難以金錢衡量，但台積電選擇迎頭因應。」

拜登政府決心加強國內IC產業，想必亦是台積電決定在亞利桑那州擴產的原因。「半導體產業現在面臨地緣戰略壓力，台積電希望加以應對。」韓儒伯說：「如此一來，它就能擬定一套以合作與同步化為基礎的策略，因應關鍵市場未來的投資需求。」

台積電曾視中國為最重要的市場之一，如今因為選擇脫鉤而調整營運考量。斥資30億美元興建的南京廠，過去象徵著台積電對中國市場的雄心，如今可能成為它在中國的同類製程末代廠房。

曾於台積電草創階段扮演育成角色的半公家機關工業技術研究院（工研院），其資深副總蘇孟宗指出，除非美中關係出現戲劇化改善或兩岸關係緩和，「否則中國市場在台灣半導體產業的重要性將逐漸消退。」

台積電也在其他主要民主國家尋找投資機會，日本尤其是重要據點。2022年，熊本縣新廠動工興建，預計創造約1,500個高科技工作機會，12吋晶圓月產能將達45,000片。新廠房

資70億美元，預訂2024年完工，台積電新聞稿指出，建廠工程「獲得日本政府大力支持。」

產業情報研究所的鄭凱安說，到日本擴產，「最主要還是希望配合品牌客戶的需求。」他指出，台積電已經取得索尼與電裝等日本大廠的訂單，日本廠產能利用率無虞。

台積電總裁魏哲家在1月法說會上指出，公司正在考慮興建日本二廠，「客戶需求與政府的支持是重要因素。」

展望未來，台積電也有機會在歐洲設廠，德國挾其工業影響力與汽車產業龐大的優勢，最有可能出線。魏哲家在法說會指出，台積電正在評估在歐洲設置特殊製程廠的可能性，將聚焦在車用技術，取決於客戶需求與政府支持。根據台積電年報，歐洲、中東與非洲的營收貢獻合計6%。

集邦科技分析師喬安說，成立歐洲新廠有幾個好處，包括貼近幾家汽車與工業客戶，而且晶片製造所需的原物料與設備資源也充沛。「然而，歐洲的環保政策嚴格、電力短缺，仍是晶圓代工廠在當地設廠的一大關卡。」她補充說。

工研院的蘇孟宗指出，台灣與歐美存在特定文化差異，可能是台積電在美國、乃至是歐洲設廠必須面對的課題。「台灣長年習慣不眠不休營運，養成犧牲奉獻的心態，可能很難複製到歐美文化。」他說：「相較於台灣，海外業務的營運效率、製造工程與技術創新速度可能會打折。」

“Having advanced fabs in the U.S. allows more convenient and direct access for branded customers to conduct new trials and/or process optimization to accelerate the chip development process,” he says.

“Proximity to customers is important,” says Rupert Hammond Chambers, president of the U.S.-Taiwan Business Council. Customers are “demanding a shorter supply chain, and while that may be hard to place a dollar figure on, TSMC is responding to customer demand.”

To be sure, the Biden administration’s determination to strengthen the U.S. domestic IC sector undoubtedly influenced TSMC’s decision to expand to Arizona. “TSMC wants to ensure that it is responding to the geostrategic pressure now being applied to the semiconductor sector,” Hammond-Chambers says. “In so doing, it can chart a cooperative and in-sync strategy to future investment demands by critical markets.”

While China once seemed destined to be among TSMC’s most important markets, decoupling has changed the chip-maker’s calculations. Its US\$3 billion Nanjing fab, once a symbol of its expectations for the Chinese market, is likely TSMC’s last facility of its kind in the country.

Barring a dramatic improvement in



TSMC grew its global foundry market share to 56.1% in the third quarter of 2022.

Sino-U.S. ties or a détente in cross-Strait relations, “China as an important market for Taiwan’s semiconductor industry will gradually decrease over time,” says Stephen Su, a senior vice president at the semi-governmental Industrial Technology Research Institute (ITRI), which incubated TSMC in the company’s fledgling years.

TSMC is also looking for growth opportunities in other major democracies, especially Japan. In 2022 the company began construction on a fab in Kumamoto prefecture, expected to create about

1,500 high-tech jobs and have a monthly production capacity of 45,000 12-inch wafers. The US\$7 billion plant, which will be completed in 2024, is being built “with strong support from the Japanese government,” TSMC said in a press release.

Of the expansion into Japan, MIC’s Cheng says: “Again, the main reason is to meet the needs of branded customers.” He notes that TSMC has already obtained orders from leading Japanese brands like Sony and Denso to ensure its Japanese fab has good capacity utilization.

矽島台灣

展望未來幾年，全球擴產將是台積電愈來愈重要的營運環節，但基於實務面，仍會以台灣為專業技術與生產的關鍵核心。「有人認為，台積電赴美投資可能會降低台灣半導體產業的重要性。」產業情報研究所的鄭凱安說：「但這樣的指控並不正確。」

他指出，亞利桑那兩廠在2026年前頂多只占4%產能，因此全球IC設計公司將持續仰賴台灣的晶圓代工廠，有助於台灣維持在半導體製造的領頭羊地位。

為此，台積電計畫擴充台灣產能，在11月開始興建高雄廠，訂於2024年開始量產28奈米晶片。

位於新竹的晶片設計大廠聯發科，其執行長蔡力行在11月接受路透社採訪時指出，公司未來會在台積電的亞利桑那廠投片生產，但該廠不會取代台灣廠。

歐布莱特石橋集團的崔歐洛提出預警，亞利桑那廠只占台積電產能的一小部分，倘若台海情勢告急，恐怕無法提供緩衝。「美國廠還是會跟台積電的新竹廠、台中廠與台南廠密不可分。」他補充說：「因此，美台中三方局勢如果生變，將會波及台積電生產鏈與全球整體IT市場。」

去年8月，美國眾議院前議長裴洛西（Nancy Pelosi）旋風

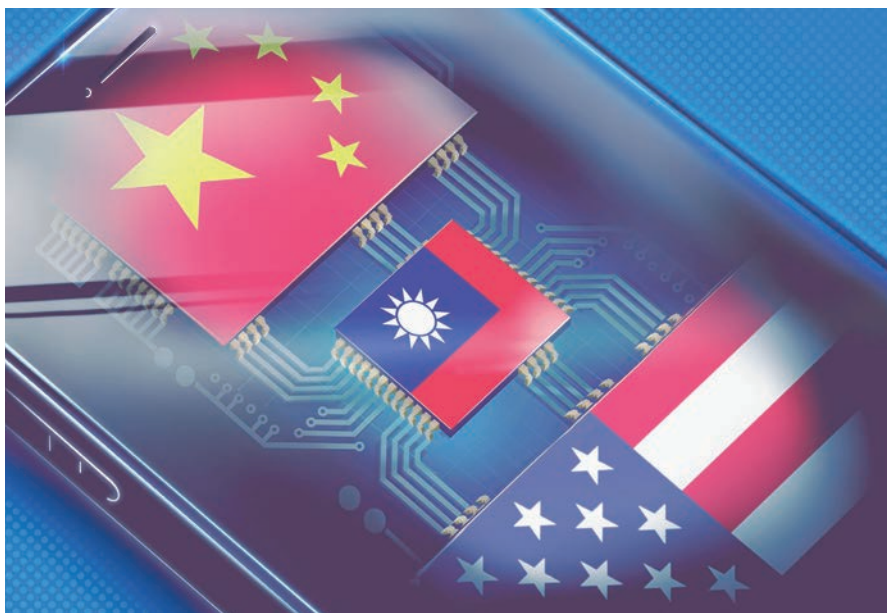
來台，引發台灣發生衝突的隱憂加劇，但並無證據顯示，中國已經放棄對外宣稱的對台政策，亦即會和平解決其所謂的「台灣問題」。事實上，中國政府似乎低調向台灣的親中派政治人物示好，同時繼續文攻武嚇，表達對蔡英文政府與美國的不悅。

中國善用軍事演練恫嚇台灣，經常被商界人士誤解是衝突升溫的徵兆，顯示心理戰的效果顯著。「中國的軍事脅迫無所不在，目的是在降低在台經商的吸引力。」美台商業協會會長韓儒伯說。

他呼籲其他國家與台灣簽訂雙邊與多邊貿易協議，反制中國削弱台灣經濟實力的企圖。「美國應該把美台雙邊貿易協定看成是第一要務。」他說：「以大區域來看，台灣也必須被納入跨太平洋夥伴全面進步協定（CPTPP）裡。有了這兩類協定，日本、英國與歐盟等經濟體就有所依循，進而與台灣自行簽訂協議，讓國內企業、乃至於全球經濟看到對台灣的信心。」

至於供應鏈分歧帶來的高昂代價，半導體分析師莫吉爾說，台灣是重要的晶片生產重鎮，美國又展現確保晶片供應無虞的決心，因此分歧是難以避免的趨勢。

「大家很喜歡全球經濟的效率，但在地緣政治風險升溫的背景下，產業效率不再是必然。」他說：「有鑑於此，各國逐漸把重點從效率轉到韌性。」



C.C. Wei, TSMC's CEO, said in a January earnings call that the company is considering building a second Japan fab "as long as the demand from customers and the level of government support makes sense."

Further down the line, a European production facility could be in the cards, most likely in Germany, given the country's industrial clout and huge automotive sector. During the earnings call, Wei said TSMC is evaluating the prospects of setting up "a specialty fab focusing on automotive-specific technologies" in Europe based on customer demand and government support. Europe, the Middle East, and Africa account for 6% of TSMC's revenue, according to the company's annual report.

There are several advantages to building a new production facility in Europe, says TrendForce's Chiao, including proximity to several automotive and industrial customers, as well as abundant raw materials and equipment for chip manufacturing. "However, strict environmental policies and lack of electricity would still be a big challenge for foundries to operate production facilities in Europe," she adds.

ITRI's Su notes that certain cultural differences between Taiwan and the West may pose challenges for TSMC in the U.S. as well as in Europe if it decides to build a fab there. "The round-the-clock operations and service mindset cultivated in Taiwan over the years would be difficult to duplicate in Western culture," he says. "Operational efficiency, manufacturing

engineering, and speed of technological innovation might be impacted in overseas operations when compared with those in Taiwan."

Silicon island

Though international expansion will become an increasingly important part of TSMC's business in the coming years, Taiwan will remain its paramount knowledge and production hub for practical reasons. "Some believe that TSMC's investment in the U.S. may lower the importance of Taiwan's semiconductor industry," says MIC's Cheng. "However, this accusation is not true."

He notes that the Arizona fabs will at most account for 4% of TSMC's production capacity by 2026. Thus, global IC design companies will continue to rely on foundries in Taiwan, allowing the island to maintain its lead in semiconductor fabrication.

To that end, TSMC plans to boost its production capacity at home. In November, it began construction on a factory in Kaohsiung that will produce 28-nanometer chips, with mass production set to start in 2024.

Rick Tsai, chief executive officer of leading Hsinchu-based chip designer MediaTek, told Reuters in a November interview that his company would be sourcing chips from the Arizona fab in the future but that it would not be a substitute for facilities in Taiwan.

Noting that the Arizona fab will

account for a minuscule share of TSMC's overall production capacity, Triolo from Albright Stonebridge cautions that it would not provide a sufficient buffer in the event of a cross-strait contingency. "That facility will still be tied umbilically to the TSMC mothership in Hsinchu, Taichung, and Tainan," he adds. "Hence any disruption created by U.S.-China-Taiwan tensions will ripple through the TSMC production chain and the global IT market as a whole."

Concern about a cross-strait conflict spiked in the wake of then-U.S. Speaker of the House Nancy Pelosi's August visit to Taiwan, but no evidence exists to suggest that China has jettisoned its stated preference for a peaceful solution to what it calls the "Taiwan question." If anything, Beijing appears to be quietly courting Taiwanese politicians it deems friendly while continuing to use coercion to show its displeasure with the Tsai administration and the U.S.

China's use of military exercises to intimidate Taiwan, often mistaken by businesspeople as a sign of impending conflict, is a potent form of psychological warfare. "The military coercion that is ever-present is designed to make Taiwan a less attractive place to do business," says U.S.-Taiwan Business Council's Hammond-Chambers.

To counter it, he urges other countries to enter into bilateral and multilateral trade agreements with Taiwan to offset the attempt to undermine Taiwan economically. "The U.S. should make a bilateral trade agreement its top priority with Taiwan," he says. "Regionally, Taiwan's inclusion in the CPTPP is a must. These two actions should provide a gateway for economies such as Japan, the UK, and the EU to walk through and consummate their own agreements telegraphing confidence in Taiwan to their own businesses, as well as the global economy."

As for the costly bifurcation of supply chains, semiconductor analyst Mosier says that it is unavoidable, given Taiwan's importance as a chipmaker and U.S. determination to secure chip supply.

"People love the efficiencies of the global economy, but those no longer are as reliable given geopolitical risk," he says. "As a result, we're seeing a shift from efficiency to resilience."

Connection With Public Vital to Moda's Success

BY JORDYN HAIME

moda

數位發展部

Ministry of Digital Affairs

It has been six months since Audrey Tang took the helm as Taiwan's official digital minister of the newly established Ministry of Digital Affairs (Moda). Tang has since made frequent appearances in domestic and international media, promoting Moda's efforts to strengthen Taiwan's digital resilience.

While Tang's PR has been successful internationally, it has not been as well received domestically.

"[Moda] is a little bit distant from the civilians in Taiwan," says Lin Ping-you, a city councilor for New Taipei City's Xizhi district. "Most people don't quite understand what [Moda] is doing."

Lin and other digital governance and cybersecurity experts interviewed share the same initial impressions of Moda: the Ministry touts a broad range of goals across sectors, but the public remains largely in the dark about the specifics.

The new Ministry comprises the Administration for Digital Industries and Administration for Cyber Security, as well as six departments: digital strategy, communications and cyber resilience, resources management, digital service, democracy network, and plural innovation. It will also consolidate telecommunications, information, cybersecurity, internet, and communications.

Moda has so far promoted several initiatives it hopes will aid Taiwan's digital transformation: plans for a backup satellite internet system, a new National Institute for Cyber Security, policy decisions such as a ban on TikTok for public sector employees, and a new platform

called TCloud, designed to help more small and medium enterprises establish an online presence.

A new government ministry can hardly be expected to produce tangible progress after just six months of operations. Still, lack of government transparency has been problematic, says Huang Szu-hui, project coordinator at Open Culture Foundation (OCF), a nonprofit that advocates for open technology.

"The government should define what they expect Moda to be," says Huang. "A consultant? Or the role of coordinating with different departments? Do they want to just be tech support or really be in charge as a leader of all digital methods? This has revealed that the government hasn't really figured out how they should define the role of Moda. It's really led to confusion of all citizens."

The newly established and highly ambitious Ministry of Digital Affairs has great potential if it can heed the many challenges ahead.

Defining Moda

Moda's website bills it as the government body responsible for promoting Taiwan's digital transformation, implementing policy innovation and reform with goals of ensuring national cybersecurity, encouraging digital transformation across sectors, and enhancing digital resilience for all. Tang has described Moda as the "motor" powering Taiwan's digital development.

But recent news of multiple data leaks has wavered public confidence in the integrity of government data management. Taiwanese also appear increasingly concerned about security and data protection in the face of growing threats to Taiwan's infrastructure and an increase in Chinese "cognitive warfare" tactics against the island.

An anonymous whistleblower told local media in October that hackers had stolen and sold over 23 million pieces of household registration data, impacting more than 200,000 people, including government officials. After the Ministry of Interior denied it was the data source, officials





Minister of Digital Affairs Audrey Tang sees Moda as the “motor” powering Taiwan’s digital development.

launched an investigation into the leak.

Other data breaches – such as a recent National Health Insurance Administration leak and an incident at China Airlines in which employees allegedly leaked data on celebrities’ travel schedules – have damaged citizens’ confidence that the government takes data protection seriously.

Even after positioning itself as a digital regulator, Moda has avoided taking on responsibility for the household registration data leak, says Yachi Chiang, an associate professor at National Taiwan Ocean University who specializes in IP and cyber laws.

“We have the Personal Data Protection Act, but there is no independent personal data office at the moment,” she says. “So while there have been multiple cases of data breaches, we don’t know which government agency is to be blamed. So no one is blamed. Nobody is taking responsibility. That’s not a good way to ensure the public that our data is safe.”

Deputy Minister of Moda Herming Chiueh maintains that the data appears to be at least a decade old and was stolen long before the Ministry was established. He adds that the government has not seen any “major cybersecurity events” in the past three years.

The problem, Chiueh says, is that the government has continued to use “very traditional ways” of transferring data – for example, copying an entire data-

base from a physical optical disk. “In this case, this disk must be destroyed after they used the data,” he says. “But this never happened. So there is a possibility it will be leaked.”

Building a digitally resilience

Moda officials say an essential part of stopping future data breaches is building a more robust digital governance structure.

“The idea of Moda is that we are organizing the government,” says Chiueh. “We combine all the different departments from different agencies. Some departments should not be independent – like the NCC (National Communications Commission). They should be working together with other ministries.”

“Digital transformation and resilience are the two most important issues in the coming years,” says Chiueh.

That means implementing stronger systems that officials hope will protect against data leaks, such as a new zero-trust cloud system called T-Road, which will allow for more efficient exchange of government data. The new regulated system will force government agencies to narrow the scope of data gathered for processing a request.

“For example, if there is statistical information they need, we should probably not give them raw data,” Chiueh says. “If what they need is personal data, in T-Road, they should be able to get limited

data.”

It’s a potentially time-consuming job for Moda, which faces a system in which each government agency has been responsible for assigning its own dedicated personnel to set cybersecurity and IT standards in accordance with the Personal Data Protection Act. Some agencies still store data in physical form.

Moda has now assumed the responsibility for stipulating cybersecurity standards, says Tseng Ken-ying, an attorney at Lee and Li Attorneys at Law specializing in personal data protection, e-commerce, the laws of the internet, telecommunications, and technology.

“If the T-Road system would conduct more monitoring activities or implement more controlling measures, it should help prevent similar incidents,” she says. “On the other hand, if the security levels for the current system and the T-Road system are the same, perhaps a centralized system for data storage would be exposed to more risks.”

T-Road, which has already been in the works for several years, has become a priority for 2023. Still, Tseng notes that although there are legal repercussions for hackers stealing and selling data, penalties are “not severe.” They’re also difficult to enforce since hacks often come from foreign actors operating in other countries. Taiwan’s lack of international recognition makes enforcement even more challenging.

And as data breaches have been appearing in the news on a regular basis, Taiwan Ocean University’s Chiang says the problem should be met with a stronger immediate response.

“Many proposed measures are for the future,” she says. But “people are worried about what’s happening right now, especially now that the threats are present ... For example, for potential sabotage of infrastructure, Moda proposed the satellite internet system as an alternative, which is great. But between the present threats and future measures, there is a gap.”

Cooperation with civil society

Tang was already a prolific software programmer before beginning her political career. After being appointed digital minister without portfolio in 2017, Tang worked to implement projects that

would bring the government closer to civil society, like the vTaiwan platform gathering government, businesses, and civil society in discussions, and a mapping of mask availability at pharmacies during the pandemic, created in 2020 by the gov civic tech community.

Tang's past engagement with civil society has sparked hope that similar efforts will continue with Moda, although some have expressed skepticism related to the limits that come with being a government official operating within a heavily bureaucratic system.

To meet these concerns, OCF has been working to keep civil society organizations in close contact with Moda. Before the Ministry's opening in August, OCF released a joint statement with the Taiwan Association for the Promotion of Human Rights, the Taiwan Open Data Consortium, and other organizations, asking

Moda to "promote freedom and openness, ensure democracy and human rights, and encourage public participation."

OCF's Huang says the public's anger over Moda's response to data leaks comes down to the Ministry's lack of a human rights concept. "Even though Moda keeps focusing on digital economy development and data security, when people are talking about Moda, their expectations are more related to their human rights, their digital identity, and how to protect their own data."

Moda has stated its intention to work closely with the public by keeping in contact with organizations like OCF and launching a call for 100 social welfare project proposals from the general public. OCF has also been collaborating closely with Moda and other government bodies to improve digital literacy among government staff and build a more open

government.

According to OCF, a resilient digital democracy involves strengthened public supervision, accountability, and civic participation through an open digital government – something that the government cannot achieve alone. The organization wants to see more concrete paths allowing civil society and government to work together to impact change.

"Cooperation between civil society and government is extremely important because Moda is no longer a single project," says Huang. "It is going to impact our country's future. As a civil society organization, our impact is only limited to certain populations. In reality, the government has to make the movement to change society. So what we can do as a civil society is show the government what works so they can develop it into their long-term strategy."

As Apple Relies Less on China, Where Does that Leave its Taiwan Suppliers?

BY MATTHEW FULCO

Taiwan continues to play a leading role in Apple's supply chain as the U.S. tech giant works to reduce overreliance on China manufacturing.

Apple has long relied on manufacturing facilities in China operated by Taiwan's Hon Hai Precision Industry Co. – better known as Foxconn – to produce the lion's share of its flagship electronic device, the iPhone. An estimated 95% of the iconic smartphones are assembled in China, and many of the parts are made at the mammoth Zhengzhou plant, run by Foxconn, the world's largest contract electronics manufacturer.

Since the U.S.-China trade dispute began five years ago, Apple has gradually moved some production capacity out of China. However, it has resisted any dramatic shifts based on a belief that China continues to offer an unbeatable production base.

Still, the environment in China is much less hospitable than in the past. Following



Foxconn was in the past the sole producer of iPhone Pro smartphones.

PHOTO: CNA



the impact of U.S. tariffs and a worsening relationship with Washington, matters were made worse by Beijing's disastrous zero-Covid policy – characterized by sporadic draconian lockdowns that shut the economy down for weeks at a time – and equally calamitous reopening.

The sudden pivot to living with Covid after three years of trying to eliminate it has caused a tidal wave of infections that has strained China's fragile healthcare system and further disrupted the battered economy.

"Geopolitical pressure, coupled with China's zero-Covid policy, have accelerated global deployment of Apple's supply chain," says Rachel Liao, a senior industry analyst at the semi-governmental Market Intelligence & Consulting Institute (MIC).

China's strict zero-Covid policy adversely affected logistics and transportation, as well as local component suppliers and assembly plants, she notes. Liao adds that the disruptions have led to a decline in production capacity utilization for manufacturers due to lower-than-expected shipments.

"For Taiwanese manufacturers, this crisis can be seen as a turning point," marked by their pivot to focusing on

resilience by beefing up non-China manufacturing and strengthening connectivity among different production locations, she says.

Joanne Chiao, an analyst at Taipei-based research firm TrendForce, says Apple plans to significantly increase production sites outside China due to growing concern about geopolitical tensions. Its focus is now shifting to India and Vietnam.

Chiao reckons that Apple aims to double its device production capacity in India and have its factories in Vietnam in operation by mid-2023. But the success of those endeavors will depend on whether production from India and Vietnam can meet demand from the North American market, which accounts for 50% of Apple's sales – the most of any region.

Foxconn currently has two major facilities in India where it manufactures electronics components and smartphones. Given the interest of Apple and other clients in India, the Taiwanese firm is expanding its presence there, most recently with a US\$500 million investment that was first reported by Bloomberg in December. Foxconn is expected to eventually produce notebook computers, PCs, tablets, and wearable devices in

India, according to a January report by Digitimes, a Taiwanese newspaper that tracks the electronics supply chain.

Compared to other contract electronics manufacturers, Foxconn has an early-mover advantage in India. It first arrived in the country back in 2006 to produce smartphones for Finland's Nokia at a facility near Chennai.

That said, other Taiwanese suppliers to Apple are ramping up their presence in India. They include Wistron, the first Taiwanese firm to produce the iPhone in India (starting in 2017), and Pegatron, which in November began manufacturing the iPhone 14 in the southern state of Tamil Nadu, according to Bloomberg.

Competition from China

Though China is starting to lose some of Apple's manufacturing, Chinese companies are ironically playing an increasingly important role in the U.S. tech giant's supply chain – even if they produce Apple devices outside their home country. In the past few years, Chinese companies have started to muscle in on Taiwanese firms that have historically dominated the Apple supply chain.

"Due to the aggressiveness of the

Chinese manufacturers to win orders and Apple's support, it is expected that the Chinese will take over a considerable share of Taiwanese suppliers' orders earlier than originally expected," says MIC's Liao.

Foxconn was forced to pause iPhone manufacturing at its Zhengzhou facility in December due to worker protests related to unpaid wages and harsh zero-Covid measures. After the halting of production lines in Zhengzhou, China's Luxshare reportedly signed a contract with Apple to begin producing the premium iPhone 14 Pro.

Luxshare has been an Apple supplier since 2011 and has been steadily increasing its share of manufacturing for the U.S. company. Luxshare has a factory in northern Vietnam where it produces Apple watches and AirPods, of which it is the world's largest producer. Partnering closely with Apple has paid off in a big way for Luxshare – its revenue grew twelvefold from US\$2 billion in 2016 to US\$24 billion in 2021 as the U.S. tech giant became its biggest customer.

However, winning orders for the iPhone 14 Pro represents the first time Luxshare has manufactured Apple's flagship smartphone – and it will come at Foxconn's expense. The Financial Times, which broke the story, described it as “a coup for Luxshare.” Foxconn was previously the sole producer of iPhone Pro smartphones.

Apple in October posted a list of its 2021 fiscal year suppliers that shows more firms from China than Taiwan. Yet that list may not tell the full story, says MIC's Liao. She notes that it focuses on direct purchases and orders and does not represent all companies that deal with Apple. For example, the list excludes such Taiwanese suppliers as the USB Type C connector supplier Longwell and cooling module manufacturer URAS Technology.

Further, more than half of Apple's Chinese suppliers are concentrated in lower-value parts of the supply chain, such as renewable metals, energy-saving, and precision mechanical components. Taiwanese manufacturers, on the other hand, dominate the manufacturing of high-value mobile-phone processors, camera lenses, and printed circuit boards, as well as device assembly.

“Taiwanese manufacturers have been

able to remain competitive due to their complete and mature technology supply chain and high-value niche market strategy,” says Liao.

The limits of leaving China

Although Apple seems committed to shifting more production from China to India and Vietnam, China will likely remain the largest manufacturer of iPhones for a while. MIC estimates that the proportion of iPhones made in India will rise from 2-3% in 2021 to 6-8% in 2023, while China's share of iPhone production will fall from over 90% in the past to 82-85% – still an overwhelming majority. By 2025, JPMorgan Chase expects India will make 25% of iPhones and Vietnam 20% of iPads and Apple Watches, 5% of MacBooks, and 65% of AirPods.

“The hard reality is that for companies such as Apple, doing advanced manufacturing of complex devices with supply chains heavily concentrated in East Asia, there are major limitations on how much capacity can be moved out of China,” says Paul Triolo, senior vice president for China and technology policy lead at Albright Stonebridge Group, a consulting firm.

“Advanced manufacturing of cutting-edge smartphones at massive scale is a tricky business, requiring hundreds of thousands of workers, carefully orchestrated and flexible supply chains, and

the ability to granularly control costs in a highly competitive market,” he says. “China has optimized for this type of process, and the Zhengzhou facility is the shining example.”

Triolo notes that the facility sits at the center of a vast global supply chain built for production at scale and with huge export efficiency benefits for Apple. For example, the Zhengzhou facility has its own customs portal, facilitating rapid shipments of inputs and finished product outputs. The Chinese government also provides a host of other perks, including worker housing, tax breaks, and other subsidies, which “keeps Apple tied to Zhengzhou and Foxconn,” he adds.

To that end, while Foxconn is no longer the sole assembler for iPhone Pro models, the Taiwanese company remains by far the largest iPhone assembler in the Apple supply chain. Taipei-based Fubon Research estimates that Foxconn produces 70% of iPhones globally. Apple's iPhone products account for around 45% of the company's revenue.

Meanwhile, MIC's Liao says that “the overall industrial environment in India and Vietnam is not yet mature enough to replicate what China offers.” She notes that India's water and electricity supply is not as stable as China's. In addition, labor management is far more challenging in India.

“Therefore, we believe that China will remain Apple's main production location for at least the next five years,” she says. ■



Rough Waters: Taiwanese Fishing Boats Reeling From Forced Labor Charges

Alleged mistreatment of migrant fishery workers and non-reporting of daily catches could lead to punishing U.S. and EU sanctions. But the issue is not Taiwan's alone to solve.

BY SEAN SCANLAN

As Taiwan and the U.S. continue to engage in trade talks under the U.S.-Taiwan Initiative on 21st-Century Trade, fishing industry issues could snag negotiations. The treatment of migrant fishery workers has come to the fore after the U.S. Department of Labor (DOL) placed Taiwanese seafood products on the *List of Goods Produced by Child Labor or Forced Labor* for the second time in September last year. Failure to rectify this matter wouldn't only drag down bilateral relations but could also threaten lucrative supply chain contracts.

While “forced labor” allegations are the latest international charge leveled against Taiwan's fishing industry, they follow a listing by the EU of Taiwan as an uncooperative nation in the fight against illegal, unregulated, and unreported (IUU) catch and bycatch. The listing ultimately resulted in a “yellow card” warning in 2015.

The EU said Taiwan's fishing industry had been uncooperative in implementing catch verification reporting and lacked

oversight of distant water fishing operations. Furthermore, weak sanctions and lack of compliance with regional fisheries management raised concerns that much of Taiwan's catch and bycatch was illegal.

Taiwan was removed from the EU's list in 2019 after it introduced measures such as pushing legislation of three deep-ocean fishery laws, improving surveillance and control systems of deep-sea fisheries, and launching a 24/7 fishing boat surveillance center.

Taiwanese seafood products were first put on the DOL list in 2020, despite

being in the clear with the EU. The reprimand followed Greenpeace's publication *Seabound: The Journey to Modern Slavery on the High Seas*. It was a black eye for a nation billed as a beacon of democracy, human rights, and economic development.

Consequences for remaining on the list include exclusion from lucrative overseas supply chains, and the potential economic losses have spurred the government to take action. But

while some progress has been made to improve conditions aboard Taiwanese distant-water fishing vessels – including a wage increase for migrant crew members and the hiring of more inspectors to carry out labor checks – these are unlikely to eliminate the wider problem, which is more complicated than it might seem at first glance.

Mistreatment aboard

Fishing vessels travel to distant waters in chase of migratory pelagic fish like tuna, skipjack, and albacore, which



PHOTO: Raymond W.L.

forage in the open ocean. Tuna's international popularity has led to a spike in demand and prices, while the latter two species make up the bulk of shelf-stable canned products.

With fishery workers spending longer spells at sea, Taiwanese vessels have become almost entirely dependent on migrant workers who accept lower wages and endure physically demanding work. Filipino and Indonesian workers make up the bulk of crews, with language barriers and isolation from friends and family further compounding the grueling work.

"Currently, most positions aboard a fishing vessel, aside from the captain and bosun (officer), are staffed by migrant workers," says Lennon Wong of Serve the People Association (SPA), a Taiwanese NGO. He adds that a typical distant-water vessel would have up to 30 migrant workers aboard.

Joe Henley, author of *Migrante*, a fictionalized account of Filipino fishery workers aboard Taiwanese vessels, has familiarized himself with many outdated laws governing the industry in Taiwan. As an example of such laws, Henley notes that any death aboard a distant-water fishing fleet may be handled with a funeral at sea or by simply tossing the deceased fisherman overboard.

This was the fate of one Filipino aboard the Taiwan-owned, Vanuatu-flagged Da Wang. Compounding the situation were allegations that the



Taiwan's Fisheries Agency in 2020 launched a four-year "Action Plan for Fisheries and Human Rights," which included increasing workers' salaries, improving labor conditions, managing labor brokers better, and increasing government oversight.

PHOTO : CNA

worker died at the hands of an abusive captain. A witness to the alleged abuse is fellow crew member Jaka (alias), who tried to report the matter when the ship made a port call in Fiji.

"I was physically abused on the boat, and so was my shipmate who died," says Jaka. "Witnessing it was traumatizing. When we docked in Fiji, we tried to pursue the case, but the police did not agree to arrest the captain. It was painful that we couldn't get justice for our friend, and for us, we continued to experience rampant physical abuse aboard the ship."

Despite the threat of jailing as a result of the incident, Jaka says the captain's attitude did not change. "Our captain was still physically abusive," he says. "We would only get three hours of sleep and then another three hours, and then five hours of sleep."

Originally from Cagayan Valley in Northern Luzon, Philippines, Jaka has for the past 10 years been working aboard Taiwanese vessels like Da Wang. He says the captain would become irate whenever the catch was insufficient or when a fishing line broke.

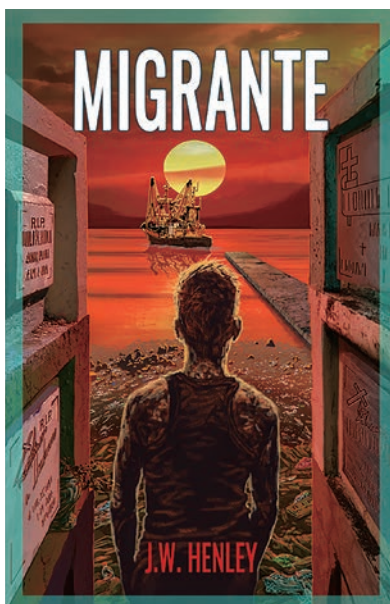
Jaka also describes the fate of a migrant fisherman who suffered a stroke while at sea that left half his body paralyzed. Without medical assistance, it was up to his fellow shipmates to care for

him, a task that included daily feeding. Despite pleas from the crew, the captain refused to make an emergency port call, and the employee was asked to continue working in his limited capacity.

"We were treated like animals," says Jaka. "Because of our hard labor, we need to eat a lot, but we were never full. We brought this up to the captain, but it fell on deaf ears. When the ship docked in Kaohsiung, I told the captain, 'I am going back to the Philippines.' When I told him this, he was unhappy, and I had to stay in their accommodation and wait 14 days for a flight, and I couldn't even leave to [buy] medicine for my asthma."

London-based Environmental Justice Foundation (EJF) began reporting on forced labor and human rights violations aboard Taiwanese ships six years ago. "They have a very bad record of compliance," says Chiu Shao-chi, manager at EJF East Asia. "We tackle issues such as human rights and the environment because we believe they are very closely related."

Chiu admits mistreatment aboard vessels seems to come with the job, as fishing is tough, dangerous, dirty work. "No one wants to work aboard fishing vessels," he says. "It is all migrant workers aboard Korean, Chinese, and Taiwanese boats." Language barriers can lead to misunderstandings, and a



lack of grievance mechanisms permeate the industry, he adds.

Complicating matters is the recruitment process, where agents act as middlemen facilitating cross-border transactions. For the Taiwanese fleet, Indonesian field agents work in small villages and partner offices in Jakarta. Anyone could exploit crew members by confiscating their documents, as the recruitment process is opaque.

In fact, most migrant workers pay a security guarantee of anywhere between US\$800-1,200, which is taken from their pay and only returned if they fulfill a three-year contract. Agents can also disappear, leaving some workers with no recourse to recover their security guarantee.

For many migrant workers, a sort of debt bondage exists. “We want to ban security deposits, but we don’t do enough due diligence to stop unscrupulous brokers,” says Chiu.

“Distant water vessels don’t have much oversight,” says Wong of SPA. “Taiwan tries to show they are improving the situation of migrant fishery workers by raising the minimum wage from US\$450 a month to 550 a month. But migrant fishery workers aboard distant water vessels are still not subject to local labor laws and don’t receive the same pay as migrant fishery workers on local fishing vessels.”

To improve conditions for migrant fishery workers, Wong suggests

including the workers in current labor laws, developing a complaint mechanism for fishery workers, and making Wi-Fi freely available on vessels.

Wong estimates that just 10% of vessels offer Wi-Fi to migrant fishery workers, allowing them to remain in regular contact with friends and family. Internet connectivity can also enable instantaneous reporting of abuse and, subsequently, immediate intervention. Captains are reticent to make Wi-Fi available, wary of expensive emergency port calls.

International collaboration needed

Taiwan was in the past slow in responding to complaints related to mistreatment of migrant fishery workers. Local authorities claimed difficulty in regulating ships in foreign waters, some of which conduct much of their operations through cargo transshipment and refuel at sea or in foreign ports. A number of vessels also fly flags of convenience (FOC, a business practice in which a merchant ship is registered in a country other than that of the ship’s owners), meaning that some vessels operated by Taiwanese companies are not subject to Taiwanese labor laws.

The reasoning by Taiwanese authorities is not baseless – an array of complicated, international factors makes it impossible for one nation alone

to monitor its distant-water fishing industry. In fact, the nature of distant-water fishing makes it one of the first truly “international” industries.

Ships may be flagged to a certain country despite only returning to that country once a year, mostly conducting fishing operations in open waters or Exclusive Economic Zones (EEZ) of other nations. Transshipment of cargo or fuel can also be conducted at sea or other international ports without the flagged country’s knowledge.

Most distant-water fishing vessels pursue pelagic fish like tuna, which migrates between distant waters, further complicating regulation. “The most abundant tuna is found in remote areas around the Marshall Islands, Papua New Guinea, and Vanuatu,” says Mina Huang, a researcher at the Environment & Animal Society Taiwan (EAST).

“Each of these countries may charge daily rates for purse seiners to operate within their 200-nautical mile EEZ,” Huang adds. Aside from Taiwan, few countries around the world have fishing companies wealthy enough to afford the privilege of such fishing within another country’s EEZ.” Taiwan has the world’s second-largest fishing fleet, with approximately 1,100 distant water tuna longliners, about 40 purse seiners, and 200 squid jiggers.

Monitoring or managing such fisheries requires multinational cooperation and international agreements to follow catch guidelines ensuring ecological balance. For Taiwan, which is excluded from most international organizations, this is a difficult feat.

“The largest and most technically complex fishing vessels are purse seiners, which are so large they travel with a helicopter on board, and a three to five vessel array to deploy fishery aggregation devices (FAD), which tuna and skipjack like to hide under in the open sea,” says Huang.

Fortunately, the operation of such purse seiners is highly regulated and monitored with an onboard observer tallying daily catches and noting all transshipments. “For example, if a ship wants to do transshipment of cargo, they have to notify authorities three days in advance,” says Huang. “How-



ever, many can go undetected as ships can turn off their GPS monitors when they make the necessary close contact with one another.”

The fishery industry is highly secretive, Huang adds. “For example, in APAC discussions, China does not want to discuss the number of vessels or location as such information continues to be quite opaque.” Apart from lack of transparency, there is also the issue of illegal fishing, which is estimated to account for 15% of annual catches, according to the European Commission.

Still, more government oversight and a stick-and-carrot approach could correct some of the wrongs in Taiwan’s fishing industry. EJF’s Chiu says her group’s research shows Taiwan’s long-distance fishing operations would go out of business without tax exemptions, fuel subsidies, and other perks such as government funding of monitoring systems.

Chiu adds that the fishing industry



has demonstrated that, when pushed, it can be nimble and responsive to change. For example, sailing a squid jigger from Taiwan to prime fishing grounds off the coast of Argentina would cost NT\$10 million in fuel alone and take two months. Companies sometimes save on

salary costs by flying migrant workers into ports closer to the catch location.

Instead of simply passing the buck to governments to protect the ocean, EAST’s Huang says consumers also need to call for greater transparency in the supply chain. Information such as where a product was caught, legality, and use of forced labor should all be answered and made easily available to consumers.

More information can ensure greater transparency, traceability, regulation, enforcement, and observation, notes Huang. Additionally, landing declarations can protect the ocean’s bounty and ensure future generations can also enjoy seafood.

While this certainly isn’t Taiwan’s problem to solve alone, it has the technology and resources to make real change and better manage the world’s shared fishing resources, ensuring greater resilience and sustainability of global fisheries. ■

Subscriptions

Make sure of getting a copy of *TOPICS* every month by filling in the subscription form below.

Fill out this form and post or fax to 886-2-2718-8182 with your payment or receipt. AmCham will begin your subscription upon receipt of payment.

Taiwan	<input type="checkbox"/> 1 year = NT\$1,500	Elsewhere in Asia	<input type="checkbox"/> 1 year = US\$75
HK/PRC	<input type="checkbox"/> 1 year = US\$68	USA/Europe	<input type="checkbox"/> 1 year = US\$90

Name: _____ Membership ID#: (if applicable) _____

Company: _____ Telephone: _____

Mailing address: _____

Email Address: _____

☐ Bill to Account (members only) ☐ AMEX ☐ Master ☐ VISA ☐ Check ☐ Telegraphic Transfer

Credit card number: _____ Cardholder's name: _____

Expiration date: _____ Total amount (NT\$/US\$): _____

Signature: _____ Date: _____

- Please make checks payable to: American Chamber of Commerce in Taiwan
- Please direct telegraphic transfers to: American Chamber of Commerce in Taiwan Acct. #: 018-1-093665-6 Standard Chartered Bank, Tunpei Branch (Please fax your transfer receipt to AmCham.)

American Chamber of Commerce in Taiwan Tel : 886-2-2718-8226 E-mail: carolinelee@amcham.com.tw

Time for Taiwan Studies

The growing research field of Taiwan studies approaches Taiwan as an entity in its own right rather than a subset of scholarship on China.

BY JULES QUARTLY

The increasing global focus on Taiwan is also reflected in the expansion of Taiwan studies, a relatively new field of academic research that frames how the world sees Taiwan.

Taiwan studies examine the island nation's anthropology, pre-history, colonialism, and many other facets, providing academic insight when it has never been more in demand. Generally thought to have emerged from under the shadow of Sinology in the late 1980s or early 1990s, Taiwan studies have become an increasingly important and well-funded area of research.

A form of soft power for a nation without many diplomatic allies and reduced political influence, Taiwan studies have spread across the world. Particularly influential organizations that propagate its dissemination are the North American Taiwan Studies Association (NTSA), a non-profit that was founded in 1994, the European Association of Taiwan Studies (EATS), established in 2004, and the Japan Association for Taiwan Studies (JATS).

There are university-based Taiwan studies programs in North America, from Alberta in Canada to Texas and Washington, and all points between. The Taiwan Democracy Project is based at Stanford University, while there was a donation last year of US\$2 million via the Taipei Economic and Cultural Office



to back a Taiwan studies program at the University of California (UC). The same year, an alumnus at UC San Diego gifted US\$5 million to the founding of a Taiwan studies center.

A total of 37 resource centers that promote Taiwan studies have been established worldwide since 2012 through Taiwan's National Central Library (NCL). This initiative follows a government policy promoting "Chinese culture with Taiwanese characteristics." Meanwhile, the retreat of China's Confucius Centers in recent years has given Taiwan space to promote traditional

Chinese language tuition through the government-backed Taiwan Center for Mandarin Learning program.

Scholarly lens

As Max Woodworth, an associate professor of geography at Ohio State University whose areas of expertise include both China and Taiwan, puts it, the U.S. started looking at China through a more contemporary scholarly lens after the Chinese Civil War (1927-1949).

"All the area studies are products of the Cold War, when area knowledge was lacking and vital," he says. "Nostalgia for the Republic of China (Taiwan), bitterness over 'losing' China to the CCP, and various, in my opinion, romanticized notions of lost democratic or capitalist possibilities in China were also a big part of the field. Very few people in China studies took Taiwan seriously as something worth studying in its own right, aside from a few anthropologists and linguists."

Woodworth adds that Taiwan eventually began to be seen as a subject of intrinsic interest, as well as a "democratic counter-example to China."

One of the foremost figures in Taiwan studies is Dafydd Fell, director of the Center of Taiwan Studies at the School of Oriental and African Studies

(SOAS), University of London, and joint founder of EATS. His areas of expertise include the intersection of civil society and party politics, which culminated in his book *Taiwan's Green Parties*, published last year.

Fell notes that multiple strands were involved in the development of international Taiwan studies, judging China studies departments as just one of these. “In more institutional form, we only start to get Taiwan studies organizations in the 1990s, such as the North American Taiwan Studies Association. Europe started a little later. Looking back, the founders of the EATS came from a variety of academic disciplines, and most would probably not see themselves as Sinologists.”

The field of Taiwan studies has grown significantly in the last five years, Fell says. In Europe, there are at least 10 active teaching programs – organized by centers of Taiwan Studies as well as special projects resulting from MOUs between the Taiwan government and academia – and “progress in the realm of publication is also so exciting,” he says. As examples, Fell cites the Routledge Research on Taiwan Studies series, which has published almost 40 books over the last decade, and the *International Journal of Taiwan Studies* (IJTS), which was established in 2018 and has become well-read and influential in the field.

Backed by Academia Sinica, EATS, and the Ministry of Foreign Affairs, IJTS is the “first internationally collaborative, multidisciplinary, and peer-reviewed academic research journal in English dedicated to all aspects of Taiwan studies,” according to the nearly 340-year-old Dutch publishing house Brill.

Fell feels the role of Taiwan studies is to raise interest in Taiwan, inform through media engagement, and advise governments on handling relationships with Taiwan. But he is more circumspect when it comes to formulating political solutions or the issue of independence versus unification.

“That might be the goal of some, including funding bodies, but I don’t believe most scholars in Taiwan studies would take that position,” Fell says.



“While these are topics that are popular subjects of research in international Taiwan studies, most scholars focus on analyzing rather than prescribing how Taiwan should handle relations with China.”

He also suggests that the “old method” of Taiwan studies, which regarded Taiwan as only having a 400-year history – a Chinese and Eurocentric viewpoint – has partially been replaced by scholarship on subjects like Austronesian migration out of Taiwan. “Taiwan has so many inspiring stories,” he says, adding that a lecture series on contemporary Indigenous peoples in London from 2017-2020 attracted a substantial audience.

One of the attendees was Tobie Openshaw, a longtime resident of Taiwan originally from South Africa. An affiliated research fellow at the University of Central Lancashire and Auckland University of Technology, he describes SOAS and its Taiwan Studies Summer School in glowing terms, referring to the alumni as “family.”

Deep pockets

This year Openshaw returned to London to give two talks, including one titled “Searching for the Koko’ta’ay,” which covered the recent finding of a 5,500-year-old female skeleton in Taiwan that links to the myths of “little people,” or a Negrito population among Indigenous communities.

Many Indigenous tribes celebrate the existence of these people through festivals and other activities, and have passed on stories about them by word of mouth for thousands of years. Along with archeological, linguistic, and ethnological evidence, the myths testify to the existence of Negritos – thought to pre-date the Austronesian migrations – who are related to people living today in the Philippines. This information and more will be turned into a book that Openshaw is co-editing.

Such a vibrant world of Taiwan studies and its further expansion would not be possible without deep pockets and willingness to fund it. As such, it is unsurprising to find the Taiwan government is the primary source of funding, mainly via the Ministry of Education, Ministry of Foreign Affairs, Ministry of Culture, Ministry of Science and Technology, and Taiwan Foundation for Democracy, along with mixed private and public funding sources like the Chiang Ching-kuo Foundation for International Scholarly Exchange (CCKF).

The latter, which was set up in 1989, supports EATS and, according to the organization’s website, it annually underwrites US\$4 million of “grant-making activities” in North America, Europe, the Asia-Pacific, and developing regions. It provides scholarships and backs projects that have produced thousands of articles, dissertations, and books.

“This funding has been critical to the development of the field, and it has gradually been increasing since the late 1990s,” Fell notes. “One problem has been that many of these funding grants have been short-term and project-based, but overall, the amount of funding available for the field has increased rapidly over the last couple of decades.”

Another grants body, the Ministry of Education Taiwan Studies Project, finances graduate and undergraduate courses on Taiwan Studies and sponsors scholarly visits and exchanges while providing a platform for academics to attend fora and conferences. It also finances publishing, databases and archives, and activities such as workshops and exhibitions.

Max Woodworth adds: “At the end of the day, the money spent on this sort

of thing is less than a rounding error in the overall budget. It's very sustainable and, I think, a completely legitimate investment in terms of building networks and disseminating knowledge about Taiwan."

There has been financial backing for Taiwan studies since the martial law period in Taiwan (1949-1987), "when writing a phrase like 'Taiwan's sovereignty' would get you thrown in jail or worse," says Ian Rowen, associate professor in the Department of Taiwan Culture, Languages, and Literature at National Taiwan Normal University.

"This funding was usually addressed toward 'Chinese studies' or 'Sinology,' in line with the rhetoric of the Republic of China," Rowen says. "The more recent reframing of such funding as for 'Taiwan studies' follows the general domestic shift away from the language of 'The ROC' in favor of 'Taiwan' – the recent passport redesign, placing 'TAIWAN' further front and center and shrinking 'ROC' is one example of this. Based on all available data, such moves are in line with long-term trends in public opinion."

While Taiwan studies is a broad multidisciplinary field, it also has a political dimension. Controversially, perhaps, Taiwan studies often appear to support the idea of independence; this at a time when China has doubled down on its promise to "reunify" the "renegade province" by force, if necessary.

The hard line adopted by the Chinese Communist Party (CCP) stance was underscored at the 20th National Congress when the constitution was amended to incorporate the "overall precise and resolute implementation of the one country, two systems directive" and made black-and-white its "resolute opposition and suppression of Taiwan independence."

As Woodworth puts it: the discipline of Taiwan studies provides "academic ballast to the idea of Taiwan as distinct."

"If Taiwan were part of China, there would be no need for Taiwan studies," Woodworth says. "So, I'd situate the move for Taiwan studies as an academic field at least partly within the project to elevate Taiwan as a sovereign entity,



which also tracks with the timing of the founding of major Taiwan Studies associations in North America and Europe."

"Area studies fields are always deeply political in orientation, even though the work tries to be serious and rigorous," he adds. "People with power and money understand that knowledge production is a major arena of geopolitical power."

Woodworth continues that China-based Taiwan scholars likely don't see any need to join international Taiwan Studies associations and their conferences or publish in their journals. He notes that this is partly due to the fact that these projects would be executed in English, "but also, by doing so they'd be tacitly endorsing Taiwan studies, which I think is frowned upon for obvious reasons."

"Unavoidably political"

For Rowen, the naming and promotion of Taiwan studies are "unavoidably political." Still, he argues this is also the case with Japan and Korea studies, which receive significantly more financial support from their respective governments. "Perhaps such political stakes are more visible when a state's sovereignty is contested."

While Rowen believes Taiwan's "widely misunderstood" geopolitical status makes its scholarship an urgent matter, he, like Fell, also acknowledges that Taiwan studies are more than just political football. He says Taiwan offers an "especially rich site to examine eth-

nicity, nationalism, democratization, indigeneity, settler colonialism, empire, urbanism, new media, environmental conservation," and much more.

"Life here is so vivid that portraits of it are not only important and fascinating in their own right, but can be used to build social theory that can shed light on other places and processes," Rowen says, adding that he has done just this in his book, "One China, Many Taiwans: The Geopolitics of Cross-Strait Tourism," which will be published in January by Cornell University Press.

Marcin Jerzewski, who heads the Czechia-based European Values Center for Security Policy's Taiwan office, has also written extensively about the role of soft power in Taiwan studies. He believes that its status as a separate discipline (rather than as a subset of China studies) is a manifestation of respect for Taiwan's individuality.

As for how this translates into political influence on a global scale, Jerzewski is also clear. "Taiwan is introduced to people who do international studies, and this will shape the minds of future elites. They will pay more attention to Taiwan as a separate entity from China, and people such as future diplomats, think tankers, and academics will shape the way they think."

Jerzewski sees the future direction of Taiwan studies as more "Taiwanized." Instead of looking through a China lens, he would prefer Taiwan studies followed in the footsteps of the New Southbound Policy, introduced by President Tsai Ing-wen's administration. This would mean strengthening ties with ASEAN, South Asia, Australia, New Zealand, and the wider world, rather than China.

Taiwan would become a springboard to East Asia and embrace multiculturalism, partly through immigration. Like other Taiwan studies academics, Jerzewski points out how completely different Taiwan is from China in terms of political and gay rights, conservation, activism, cultural and indigenous affairs, and social justice.

Further "Taiwanizing" Taiwan studies would also make the argument, of course, for a nation that has been and is separate from China, bringing with it significant international ramifications. ■

The American Chamber of Commerce in Taiwan

Business Climate Survey

2023 Report



Conducted between November 15 and December 16, 2022,
214 of 437 eligible member companies completed the
2023 Business Climate survey, a response rate of 49%.

Measured Confidence Despite Headwinds in 2023

A Message from AmCham Taiwan Chairperson Vincent Shih



Notwithstanding heightened political risk and global economic headwinds, the 2023 Business Climate Survey shows strong optimism among AmCham members. Respondents expressed a high level of confidence in both Taiwan's economy and their own company's business prospects for the coming year and beyond.

The annual survey is based on an online questionnaire sent to AmCham's voting members, the majority of whom are C-suite executives of leading international and domestic businesses. In this year's survey, nearly 71% of respondents expressed confidence in Taiwan's economic outlook over the coming year, a decrease of 16 percentage points compared with 2022. Nearly 73% were optimistic about their companies' prospects for revenue growth during the same period, a decline of 17 percentage points. Confidence remains strong overall, but it has been adjusted downward from the heady days of late 2021.

The outlook for the next three years was also hopeful, though many respondents have shifted from "very confident" to "somewhat confident" in the past year. Of concern to many were global economic and geopolitical uncertainties (including cross-Strait tensions), energy supply issues, and the pace of regulatory reform. On the latter point, members indicated that more needs to be done to bring Taiwan's regulatory framework into line with global norms.

The survey also found that:

- 88% of respondents plan to maintain or increase investment in Taiwan in the upcoming year.
- Human capital was found to be a priority, with 60% of respondents investing in staff expansion or training in 2023. Over half expect to keep their headcount largely the same over the next 12 months, and 39% plan to hire more people.
- Survey takers expressed general satisfaction with Taiwan's workforce but see the need for improvement in foreign-language capability, leadership skills, and international mindset.
- At 2.8 on a scale of 1-5, the level of anxiety about increased cross-Strait tensions remains moderate. Meanwhile, 67% of companies reported that their operations were unaffected by the increased Chinese military activity in the second half of 2022.
- Four-fifths of companies reported at least some negative business impact due to Taiwan's domestic Covid outbreak in 2022. While 45% said border restrictions disrupted their operations, 63% had an overall favorable assessment of government efforts to manage the pandemic.
- Asked about their ESG activity for the first time in this survey, companies responded that their efforts are mainly directed toward diversity and inclusion, corporate governance, and emissions reduction. Around 56% reported making a formal commitment to achieving net zero emissions, 100% renewable energy, or a similar target.

AmCham looks forward to discussing the survey findings with the Taiwan authorities as part of our shared objective of bolstering Taiwan's already strong business climate. The increase in international competition only intensifies the urgency of our work.

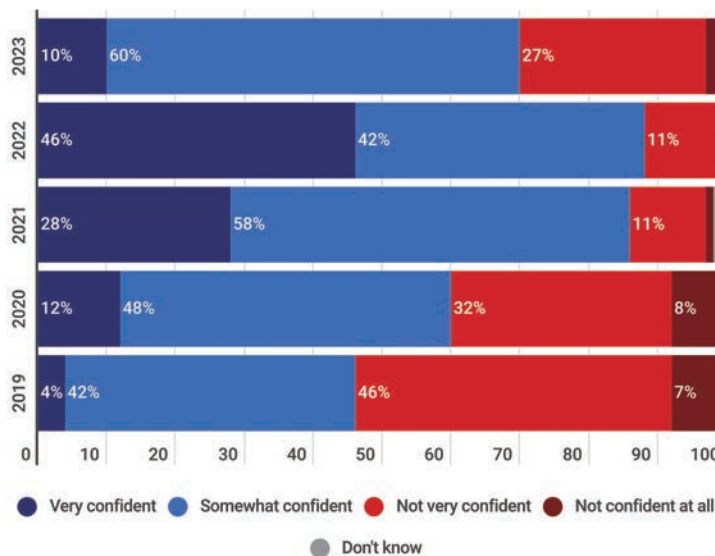
Confidence in economy lower yet solid

Taiwan in 2021 boasted an economic growth rate of 6.45%, the fastest pace since its rebound from the 2010 global financial crisis. However, in Q1 2022 the economy shrank for the first time in six years. Following further slowdown and weakened global demand for products in Q4, Taiwan's year-over-year GDP growth was 2.43% in 2022.

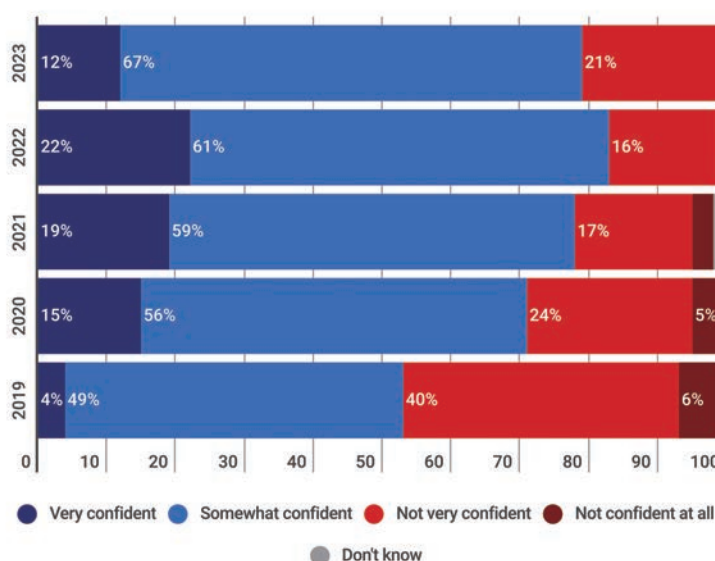
Although Taiwan is projected to experience continued slowed economic growth in 2023, with the Chung-Hua Institution for Economic Research forecasting GDP growth of 2.72%, confidence in the economy remains relatively high among AmCham members.

This year **nearly 71% of respondents expressed some level of confidence in Taiwan's economic growth over the next 12 months**, while **79% expressed confidence over the next three years**. Although these numbers represent decreases of 16 and four percentage points, respectively, they show that belief in the economy remains strong.

How confident are you about Taiwan's economic growth outlook over the next 12 months?



How confident are you about Taiwan's economic growth outlook over the next three years?



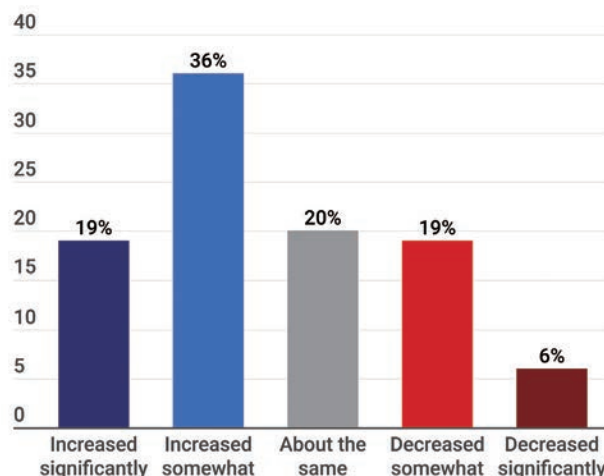
BUSINESS PERFORMANCE & CONFIDENCE

Solid performance in 2022

Survey respondents reported strong corporate performance, with **75% recording stable or increased revenue in 2022**. A quarter of respondents, however, experienced worse revenue numbers than the year prior.

Out of the respondents that reported decreased revenue, **39% were firms providing financial or professional services**. Chemical manufacturers and companies in the transportation and logistics sectors each represented 12% of respondents with decreased revenue in 2022.

How did your company's 2022 revenue in Taiwan compare to 2021?

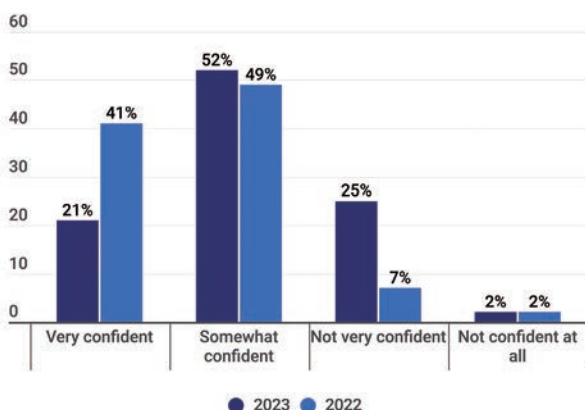


Lowered short-term confidence, robust longer-term confidence

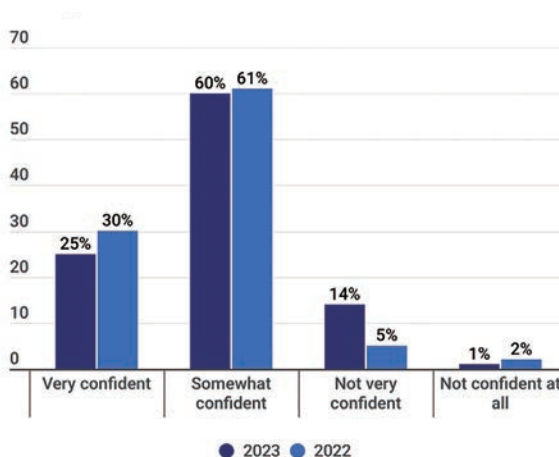
Respondents reported decreased confidence in their own company's performance in the upcoming year, with 20 percentage points fewer saying they were "very confident" in their company's revenue growth in 2023 compared with 2022. However, the number of companies expressing confidence over the next three year decreased by only six percentage points.

Longer-term confidence, on the other hand, remained robust, suggesting companies expect to rebound from economic headwinds quickly.

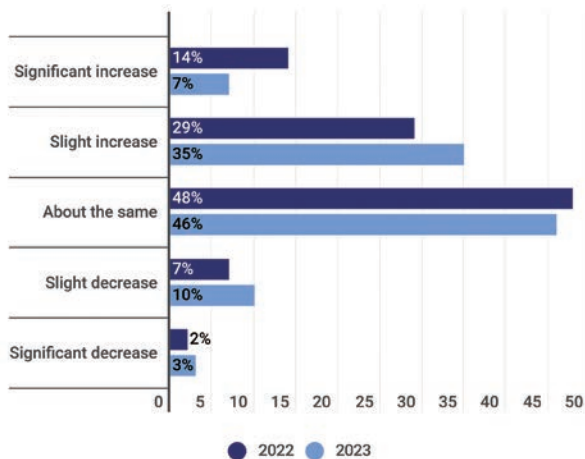
How confident are you about your company's revenue growth in Taiwan in the upcoming year?



How confident are you about your company's revenue growth prospects in Taiwan over the next three years?



Investment changes last year and projected for 2023



Planned areas of investment for 2023



Strong investment continues

Members maintain a strong belief in the Taiwanese market, with **around 91% of companies maintaining or expanding their level of investment in Taiwan during 2022** and 88% planning to maintain or expand investments in 2023. However, the number of companies planning to significantly increase their investments saw the biggest change, dropping by seven percentage points.

New products for more markets

Among companies that invested in R&D, **65% said they were creating new products and services for both Taiwan and overseas markets**. Meanwhile, 28% are creating products exclusively for the Taiwan market.

The three most prominent areas of business growth opportunities identified among respondents were larger share of existing market (64%), product or service innovation (58%), and entry into new market sectors (47%).



2023

2022

40%	agreed that regulations can be researched easily.	49%
-----	---	-----

27%	agreed that government bodies usually give serious attention to comments from the public (including stakeholders).	33%
-----	--	-----

27%	agreed that draft regulations are given a sufficient public notice and comment period.	41%
-----	--	-----

46%	said laws and regulations are not updated in response to changing societal and economic needs.	35%
-----	---	-----

43%	said laws and regulations are interpreted inconsistently and can be subject to different interpretations by various government bodies or personnel.	40%
-----	---	-----

42%	said new regulations at times fail to meet economic needs and demonstrate a thorough understanding of industry and/or business dynamics.	30%
-----	--	-----

Regulatory environment considered important

This year's survey included the optional, open-ended question, "**What do you consider to be the most important area for improvement in Taiwan's business environment in 2023?**"

Among those who responded, **34% mentioned improvement of regulations and policies as the most important area of improvement.** Advancement of regulations' effectiveness and alignment with international practices were some of the most common answers among these companies.

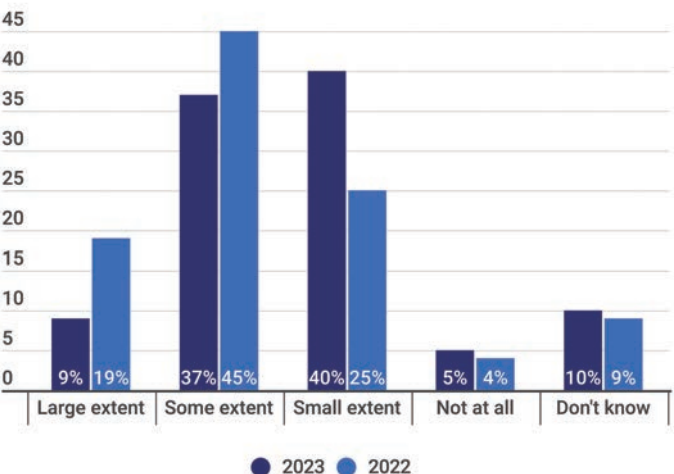
White Paper issues: declining satisfaction

Since 2017, the National Development Council (NDC) has been holding meetings with AmCham committees to track and facilitate progress on issues in the Chamber’s annual *White Paper*.

While 13 issues from AmCham’s 2020-2021 *White Paper* cycle were resolved, the number of solved issues dropped to five for the 2021-2022 edition.

Sentiments on the effectiveness of AmCham and NDC’s *White Paper* meetings reflect these numbers. However, **86% of respondents still view these meetings as effective to some degree**, compared with 89% last year.

To what extent do you consider the *White Paper* meetings effective?



What areas do you feel should be the government’s top priorities in the next 1-3 years?

Respondents could select up to four options

- 55% said cross-Strait relations
- 44% said talent development and retention
- 42% said energy sufficiency
- 40% said national security
- 30% said securing a bilateral trade agreement with the U.S.

Increased focus on security

Companies urged the government to prioritize national security and trade relations with the U.S., China, and other partners. In the domestic sphere, talent and energy – two of Taiwan’s so-called “five shortages” – were raised as areas of importance to businesses.

This year, national security replaced pandemic control as one of the five most pressing issues. Aside from this change, respondents’ priorities have remained largely the same.

CHALLENGES

Calls for resilience and streamlining

Survey takers reported that political uncertainty was the biggest factor deterring further investment in Taiwan. Then-U.S. Speaker of the House Nancy Pelosi's August visit to Taipei and the subsequent Chinese military activity occurred in the months before this survey was conducted.

On the energy side, **companies reported electricity supply (74%), grid resiliency (70%), and availability of green energy (68%) as their biggest concerns.** Both grid resiliency and renewable energy were raised in the 2022 *White Paper* by AmCham's Energy Committee. Since 2018 the Committee has called for streamlining regulatory approval for renewable energy projects – a measure that would alleviate concern over electricity supply – and offered ways in which Taiwan can improve grid resiliency.

Which factors deter your company from expanding or investing in Taiwan?

66% said political uncertainty

55% said bureaucracy

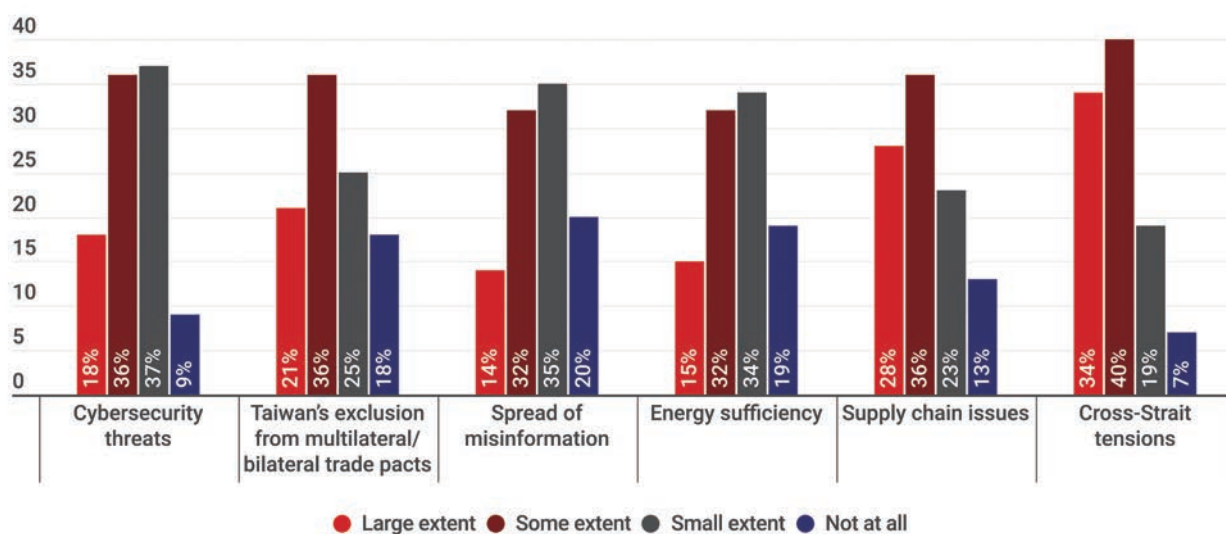
43% said market stagnation

42% said difficulties finding skilled labor

33% said protectionism

When asked about risks to their company's operations, 91% of respondents said they expect cybersecurity threats to impact them negatively. Although its responsibility extends beyond cybersecurity issues, the newly established Ministry of Digital Affairs (Moda) provides reassurance that cybersecurity concerns are receiving government attention.

To what extent will the following negatively impact your company's business operations in 2023?



Lingering impact during 2022

While **63% said they were satisfied with the Taiwan government's efforts to control the pandemic**, satisfaction levels among member companies regarding the government's handling of the pandemic in 2022 fell from almost universal support in 2020 and 2021.

During 2020, Taiwan was hailed as an example of successful pandemic control. Thanks to swift action from the government, Taiwan ended 2020 with a total of just seven Covid-related deaths.

The limited spread was largely due to the government's decision to ban all foreign nationals that did not hold a Resident Certificate or special entry permit on March 19, 2020. Other travel restrictions, such as quarantine upon arrival and requirements of providing negative Covid tests, were also implemented.

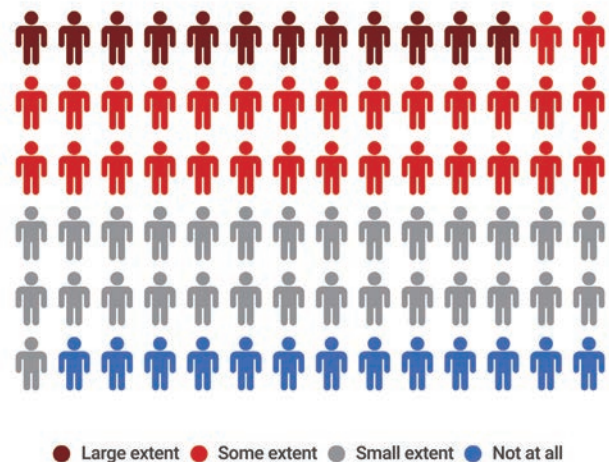
Taiwan experienced its largest Covid-19 outbreak in the spring of 2022. Fueled by the Omicron variant, the wave peaked in late May.

The borders were closed to most travelers for two and a half years until October 13, 2022, when Taiwan removed all Covid-related travel restrictions and allowed travelers to enter without mandatory quarantine upon arrival.

Many companies called for the end of Taiwan's border restrictions throughout 2022, arguing that the inability to bring in investors, partners, and technical support personnel was hurting business.

Around 85% of survey respondents said their business had been negatively impacted by the summer outbreak, with 14% reporting a significant impact. Meanwhile, **45% said their business had been seriously impacted by Taiwan's border restrictions in 2022.**

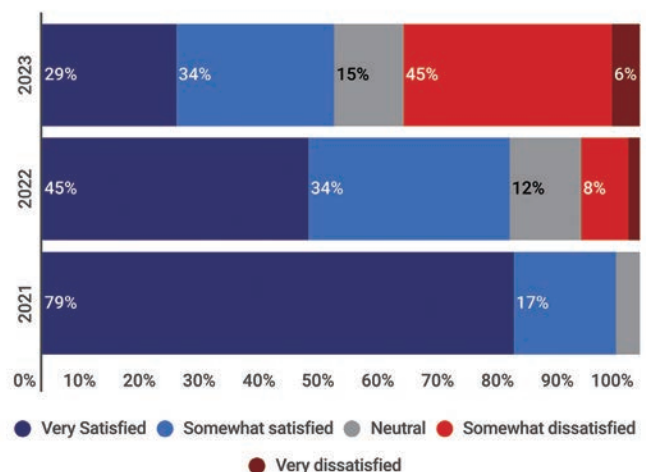
To what extent did the local Covid outbreak in 2022 negatively impact your business in Taiwan?



Was your business seriously impacted by Taiwan's border restrictions in the past year?



How satisfied are you with the Taiwan government's efforts to control the Covid-19 pandemic?



To what extent do you consider Taiwan's workforce to be globally competitive in the following aspects?

Respondents could select up to four options

TOP 6

1. Diligence

2. Trustworthiness

3. Execution

4. Teamwork

5. Loyalty

6. Ethics

BOTTOM 6

14. Creativity

15. Leadership

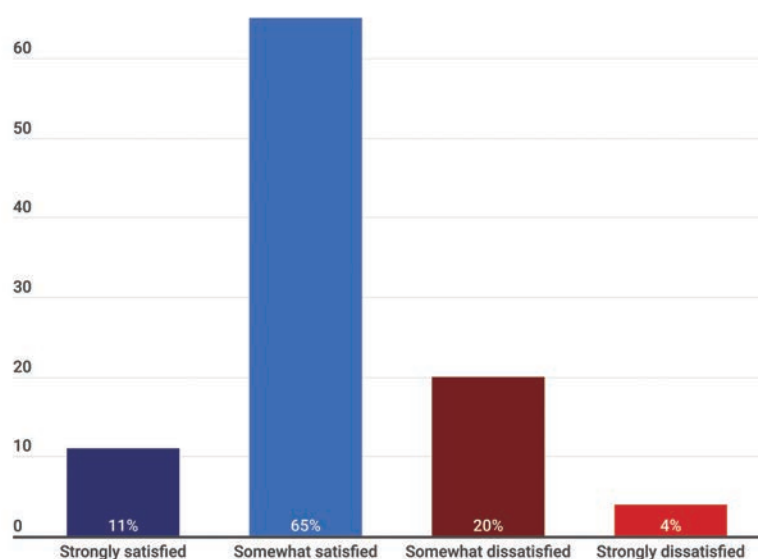
16. Communication

17. International mindset

18. Foreign language ability

19. English ability

To what extent are you satisfied with your company's ability to recruit personnel to meet your business needs?



Talent a priority

Human capital was identified as a top priority among Chamber members. A high **60% of companies said they plan to invest in staff expansion and development during 2023.**

Member companies value the diligence and trustworthiness of Taiwan's workforce. **Two-thirds reported that they are satisfied with the talent pool** and their ability to find recruits that fit their needs. In last year's survey only 49% of respondents said they were satisfied.

However, companies reported that language abilities, communication skills, and international mindset could all use improvement. The government's Bilingual 2030 policy, which aims to improve English abilities among young Taiwanese, will therefore be of critical importance to the strengthening of domestic talent.

Education reform – an area some companies ranked highly as a suggested priority for the government over the next three years – should also include an emphasis on creativity and leadership skills, two areas that ranked low.

Echoing their confidence in Taiwan's economy over the next year, **a vast majority (91%) of companies plan to keep staff numbers at their 2022 level (52%) or increase them (39%).**

Taiwan viewed as safe and convenient

Members list Taiwan's world-renowned healthcare system and low crime rates as the most attractive aspects of living and working here. Rounding out the top five were comparatively low living costs, a stable society, and public transport, including convenient, affordable MRT systems in the larger metropolitan areas and high-speed rail.

The biggest negative factor was seen as road safety, an issue that has recently gained international media attention. Subsequent coverage of high-profile traffic accidents in local media may have also contributed to respondents' perceptions.

Taiwan's banking sector has long been criticized for outdated procedures, accessibility issues for foreign nationals, and excessive red tape. One respondent commented that Taiwan's "banking system is archaic and needs to be reformed to be more like Hong Kong or Singapore."

Another respondent highlighted the elimination of discrimination against foreign nationals and their businesses in the banking and financial sector as the most important area for improvement of Taiwan's business climate.

To what extent do you agree that the following aspects make Taiwan a good place for foreign professionals to live and work?

Out of 16 factors

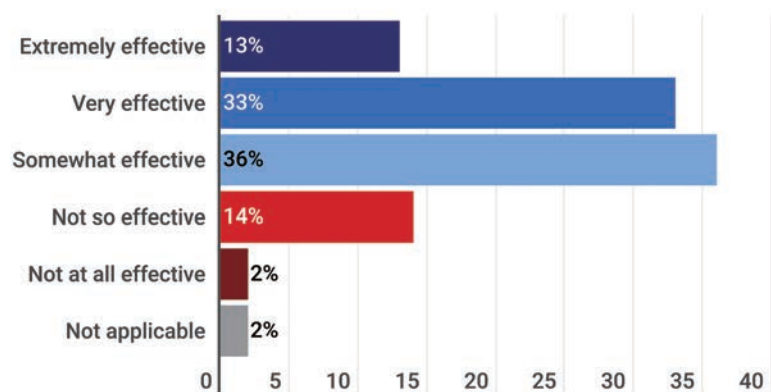
TOP 5

1. Personal safety
2. Healthcare system
3. Living costs
4. Social stability
5. Mass transit

BOTTOM 5

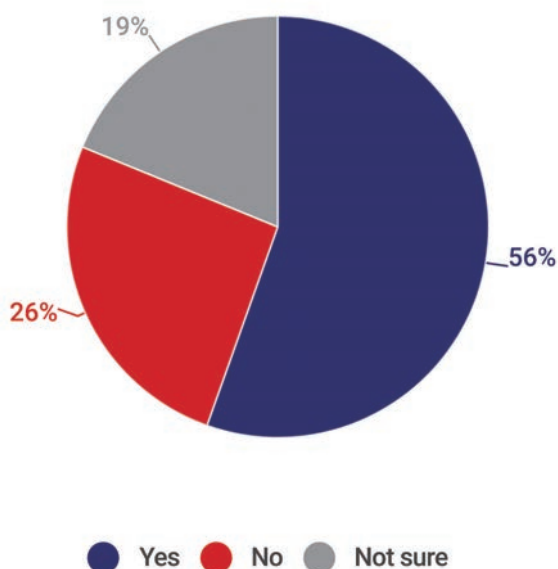
12. Job opportunities
13. Air quality
14. Building quality
15. Banking
16. Road safety

How effective has remote working been for your company?



The majority of businesses (82%) reported that remote working practices had been at least somewhat effective for their company. However, **only 49% of respondents intend to implement long-term remote working solutions**, while 44% intend to return to their traditional work model. Companies providing professional services (24%) and healthcare-related products and technologies (19%), as well as the ICT industry (17%), were the most likely to find remote working effective.

Has your company made a formal commitment to ESG principles?



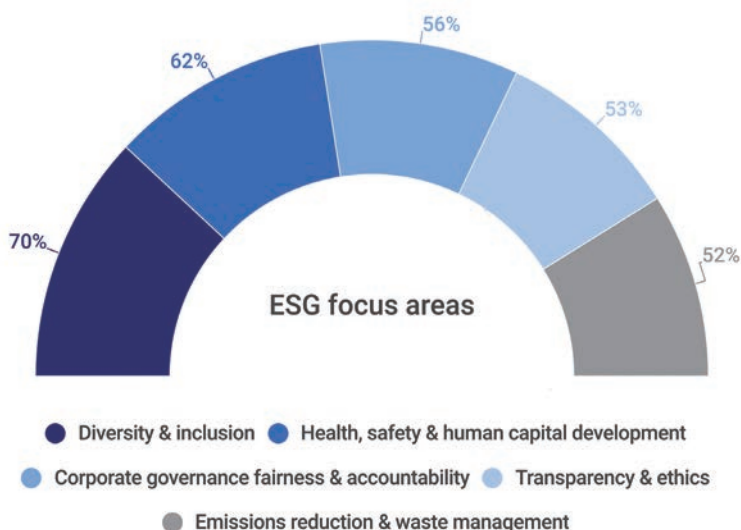
ESG a widespread priority

Respondents place high value on following environmental, social, and corporate governance (ESG) principles, **with 56% having made a formal commitment to net zero, RE100 (100% renewable energy), or similar initiatives.** This is the first time AmCham members were surveyed on ESG as part of the Business Climate Survey.

Companies are focusing equally on human capital, governance, and the environment. However, fewer than half (47%) have a dedicated team to implement these principles effectively. This is perhaps due to the reported size of individual companies, as 36% of respondents have 50 or fewer employees in Taiwan and may not be able to designate a full team to implement ESG principles.

“Diversity and inclusion” was the most popular issue among respondents, as 70% reported they will focus on this area over the next three years. Investments by respondents in training and professional development over the previous year also reflect members’ emphasis on human capital. Taiwan in 2019 became the first in Asia to pass marriage equality legislation. It is also ranked high internationally for gender parity in government and the wider workforce.

In second and third place were health, safety, and human capital development (62%) and corporate governance (56%), followed by transparency and ethics (53%) and emissions reductions and waste management (52%), which ranked fourth and fifth, respectively. **Taiwan has made a formal commitment to achieving net zero by 2050,** making it critical for businesses here to reduce emissions and transition away from carbon-intensive materials.



International agreements highly valued

A majority of AmCham member companies (73%) consider it important to their business for Taiwan to achieve a bilateral trade agreement (BTA) with the United States, a long-standing advocacy issue of the Chamber. **The number of respondents considering a BTA important increased by six percentage points from last year.**

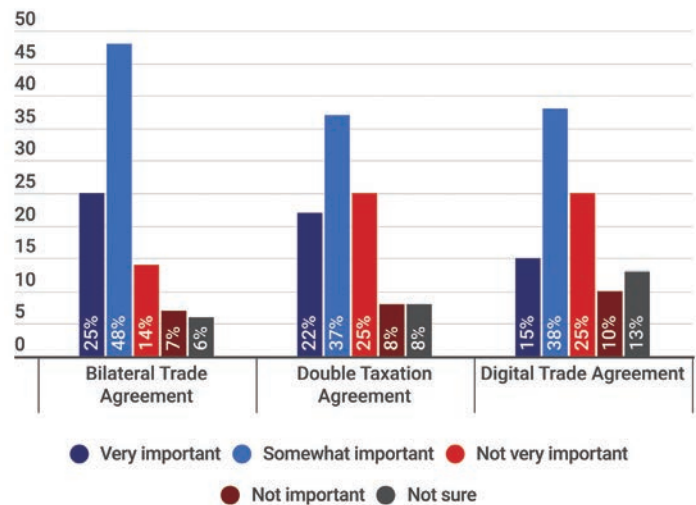
Companies are perhaps encouraged by recent talks between the United States and Taiwan under the U.S.-Taiwan Initiative on 21st-Century Trade and the numerous high-level trade visits by U.S. federal and state officials to Taiwan over the past six months. **The U.S. is Taiwan's second-largest trade partner, accounting for approximately 15% of all trade at US\$114 billion in 2021.**

Respondents also support Taiwan's inclusion in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, or CPTPP. **Member countries include some of Taiwan's largest trading partners, including Japan, Singapore, Vietnam, and Malaysia. Taiwan applied to join the CPTPP on September 22, 2021.**

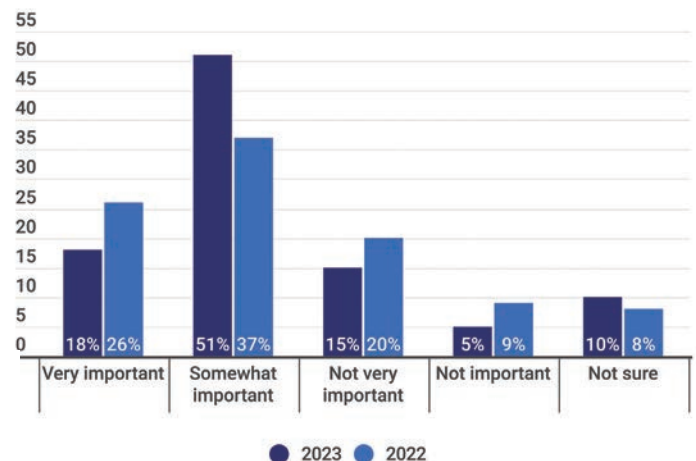
CPTPP signatories (dark blue) and applicants (light blue)



How important would the following agreements with the United States be to your business?

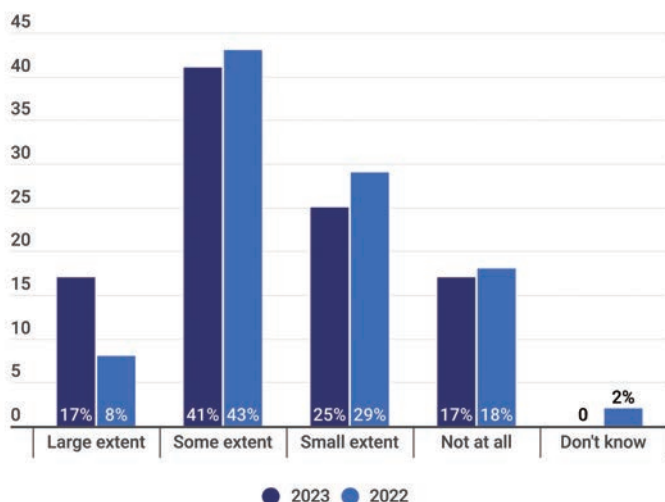


How important would Taiwan's participation in the CPTPP be to your business?

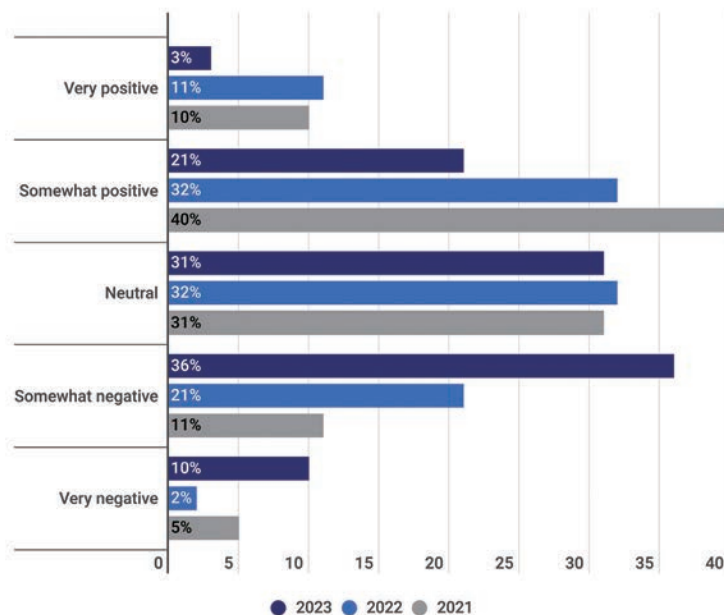


TRADE RELATIONS

To what extent has increased competition between the U.S. and China impacted your business?



What has been the economic impact on Taiwan of increased competition between the U.S. and China?



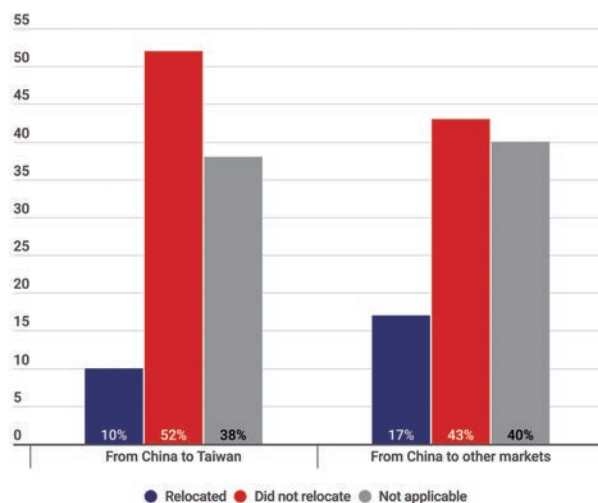
More affected by U.S.-China trade dispute

This year 83% of respondents reported at least some impact of the US-China trade dispute on their business, which is slightly higher than the figure reported in 2022 (80%).

More respondents viewed the impact of increased competition between the U.S. and China as unfavorable to Taiwan than in previous years. This development follows the introduction of export controls by the United States that in effect cut China off from advanced semiconductors made with American technology, and a push to diversify tech supply chains, affecting many ICT companies.

When asked if their company had relocated some or all of their operations from China to Taiwan in the last five years, **10% reported that they had**. Similarly, **17% reported** that their company had relocated operations from China to a market other than Taiwan.

Companies that relocated business from China over the past five years



Most companies unaffected by increased tensions

When asked if their company had experienced significant disruption due to increased tensions across the Taiwan Strait, **33% reported disruption**, which is 16 percentage points more than the figure reported in a flash survey by AmCham conducted immediately after Chinese military activities began.

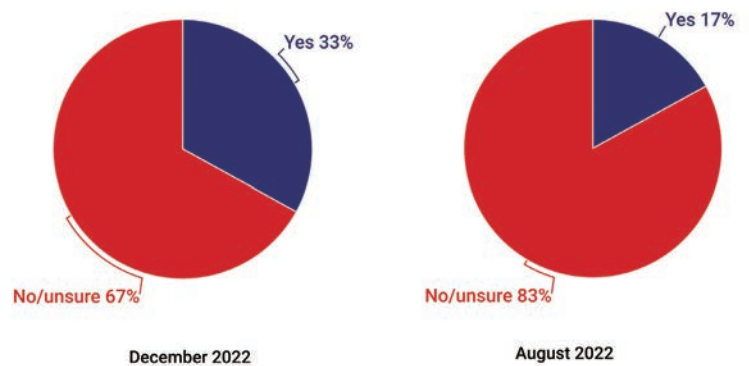
A third of companies reported being disrupted by elevated concern or policy changes from their global headquarters, followed by increased shipping, insurance, or financial costs (30%) and staff anxiety (29%). Fourth and fifth on the list of disruptions were delays (28%) and lost investment or strategic opportunities (21%).

Overall, personal anxiety about increased military activity or tensions across the Strait **remained flat between August and December 2022**, at 2.8 out of 5.

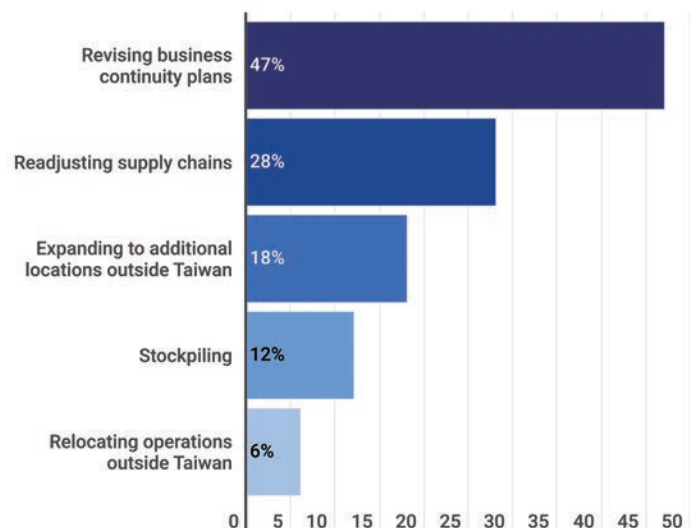
Nevertheless, 47% of companies said they either have revised or plan to revise business continuity plans to address the new geopolitical climate.

When asked what the government's focus should be in the next 1-3 years, 55% responded cross-Strait relations.

To date, has your company been significantly disrupted by increased tensions across the Taiwan Strait?

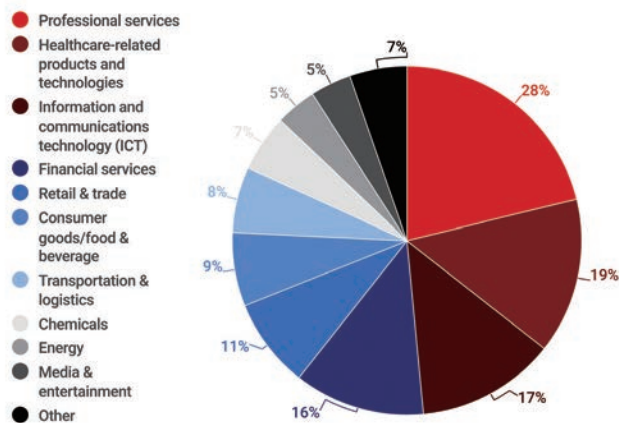


What is your company doing to reduce the likelihood of future disruption?

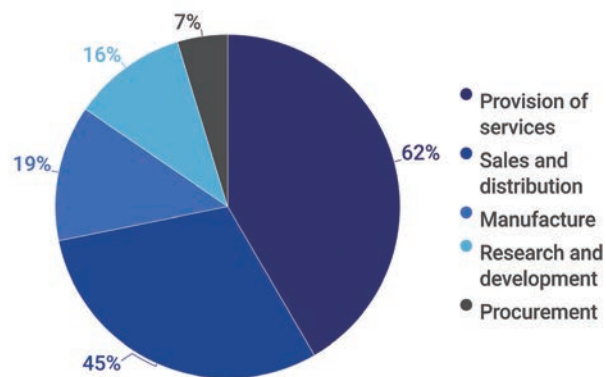


ABOUT THE RESPONDENTS

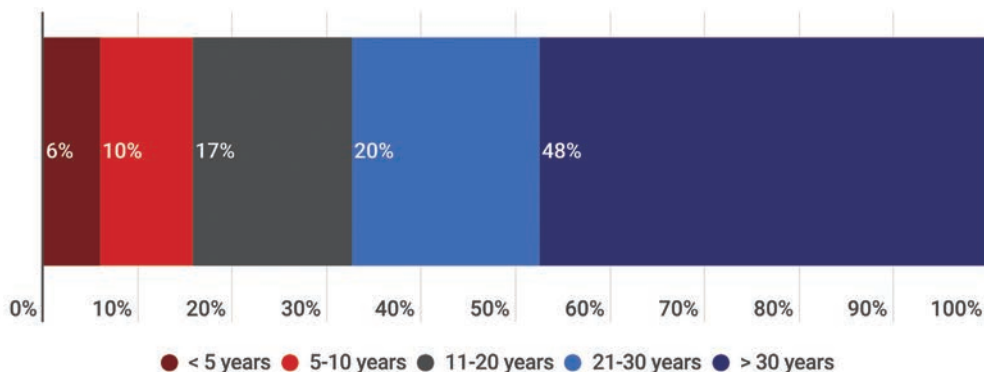
Industry classification



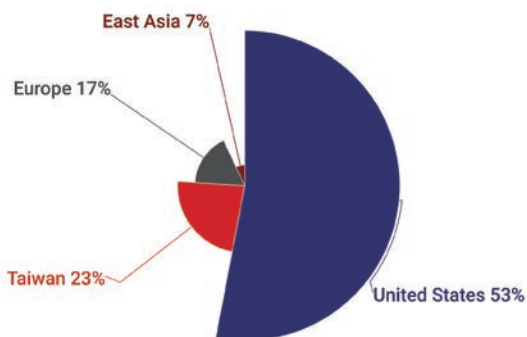
Primary activity in Taiwan



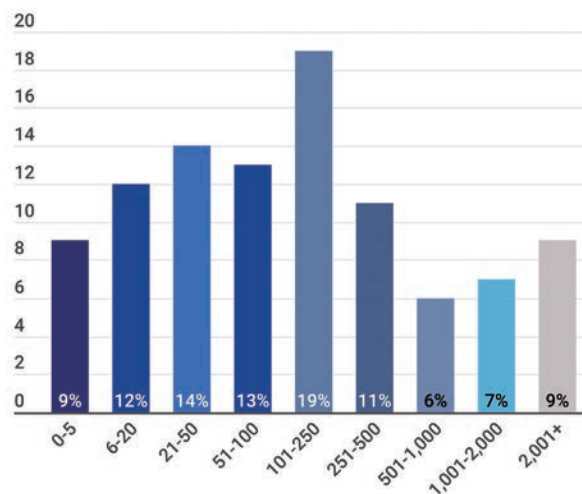
Years of operations in Taiwan



Location of headquarters



Number of employees



Stay Up To Date with AmCham's New Podcast

Business Leadership Interviews & News Coverage Every Month

February's Guest:

Honoré Tchoukuegno

Vice-President and CFO, Mercedes-Benz Taiwan

What drives this seasoned executive?

How does he motivate his team and
invest in innovation?

What's his favorite Taiwanese dessert?



Listen Now



Available on Apple Podcasts, Spotify, major
podcast platforms
and topics.amcham.com.tw/listen

Executive Sweet

in cooperation with





Coming Together for Citizens' Health



In developed and rapidly expanding regions, living a healthy, active lifestyle and taking nutritional supplements have become popular topics of discussion. To ensure that citizens of all ages can lead healthy, active lives, collaboration within and among industry, academia, and government has also become increasingly crucial.

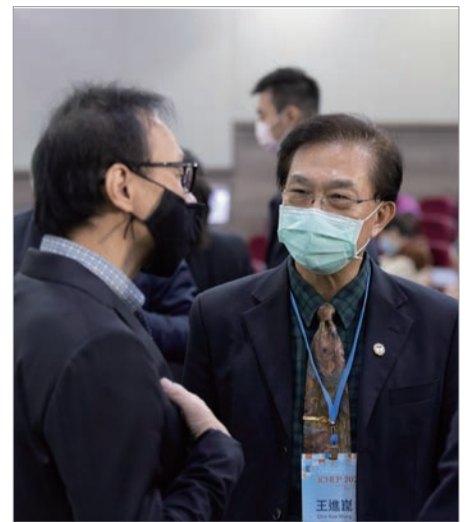
Continuing the discussion to pro-

mote health and nutrition from the previous year, the 2022 Citizen's Health Forum was held on December 18 at the National Taiwan University Hospital's International Convention Center. The forum serves as a platform for providing recommendations to healthcare professionals, nutritionists, and food science experts, as well as advancing collaborative opportunities.



During this half-day hybrid forum, AmCham invited healthcare professionals from Taiwan, Japan, Hong Kong, and Canada to discuss and explore cholesterol issues with a focus on dietary oxidized cholesterol, dietary supplements for healthy aging, the roles of branched-chain amino acids (BCAA) in sports nutrition, and the effects of pre-exercise cystine and glutamine intake on gastrointestinal permeability and subjective fatigue in active young men.

The forum was divided into three sessions focusing on equally important



aspects of citizens' health. The first session, which bore the theme of health policy, included presentations on a population-based approach to promoting healthy diets for the elderly in Taiwan and making sports nutrition a protective shield for exercise habits.

The second session focused on health promotion and included experts' knowledge-sharing on cholesterol issues with a focus on dietary oxidized cholesterol and the question of the necessity of dietary supplements with specific compositions of amino acids for healthy aging.

Finally, the third session covered health nutrition and included presentations and discussions on the roles of BCAA in sports nutrition and the effects of pre-exercise cystine and glutamine intake on gastrointestinal permeability and subjective fatigue in active young men.

Opening remarks at the forum were

provided by Chairman of the International Conference of Health Evaluation and Promotion (ICHEP) 2022 Dr. Kuo-Chin Huang, AmCham Taiwan President Andrew Wylegala, AmCham Retail Committee Co-Chair Ceasar Chen, Vice President of Herbalife Nutrition North Asia Stella Tsai, and President of Ajinomoto Taiwan Shigeaki Itzusu.

Speakers and panelists included: Chia Shu-Li, deputy director General of the Health Promotion Administration, Ministry of Health and Welfare; Dr. Che-Hung Lin, deputy director-general, Sports Administration, Taiwan; Dr. Kuo-Chin Huang, chairman, ICHEP 2022; Dr. Zhen-Yu Chen, chair professor, School of Life Sciences Graduate Division, the Chinese University of Hong Kong, Hong Kong; Dr. Rajavel Elango, associate professor, Department of Pediatrics, Faculty of Medicine, Uni-

versity of British Columbia, Canada; Dr. Chin-Kun Wang, distinguished professor and former president, Chung Shan Medical University, Taiwan; Dr. Yoshiharu Shimomura, professor emeritus, Nagoya University, Japan; Dr. Masashi Miyashita professor, Faculty of Sport Sciences, Waseda University, Japan; and Dr. Chia-Hua Kuo, distinguished professor, Institute of Sports Sciences, University of Taipei.

The 2022 Citizen's Health Forum was organized by AmCham Taiwan, ICHEP 2022, and the Taiwan Society for Sports Nutrition. It was co-organized by the Asian Nutrition Society for Sports and Health, Chung Shan Medical University, ILSI Taiwan, School of Life Sciences of The Chinese University of Hong Kong, and University of Taipei Sports Science.

The event was sponsored by Ajinomoto and Herbalife Nutrition.



Meet Honoré Tchoukuegno of Mercedes-Benz

With more than 25 years of leadership experience within Mercedes-Benz, Honoré Tchoukuegno is a seasoned executive who always looks to bring the best out of his staff. After working at Mercedes-Benz in Germany and China, Tchoukuegno in 2019 took on the role of Vice President and Chief Financial Officer of Mercedes-Benz Taiwan.

Tchoukuegno connected with TOPICS editor Julia Bergström at the Ghost Island Media recording studio to discuss his career journey, the importance of creativity in finance and engineering roles, and what Mercedes-Benz is doing to improve the driver experience. An abridged version of their conversation follows – to listen to the full conversation, visit topics.amcham.com.tw/listen.

You're the first CFO to be featured in our Executive Suite series. What does a Chief Financial Officer do, and what kind of characteristics does a CFO need to be successful?

It is my great honor and privilege to be the first CFO featured in the Executive Suite series!

Being a CFO involves more than just finances – it's about collaborating with the CEO and management team to drive business performance, keeping costs under control, boosting efficiency and automation, managing people, and making sure the right team is in place, engaged, and motivated.

A successful CFO needs to have a good overview of the company and know every aspect of the business to successfully allocate resources and capital. How can you properly allocate resources if you do not know what's going on in the company? You also need to be an active listener. You need to know the company's strategy and make sure business needs are aligned with it while making the best possible use of limited resources. And, of course, it's about being able to prioritize.

What prompted you to apply for your first job at Mercedes-Benz, and what has compelled you to stay with the company for more than 25 years?

I was looking to work for an innovative, multinational company, and Mercedes-Benz was the best fit. I joined through our management trainee program, which provided me with great opportunities. Over the past 25-plus years, I've taken on various exciting roles, collaborated with fantastic colleagues, and lived in different countries – all reasons for my continued commitment to the company.

Mercedes-Benz was recently ranked by Interbrand for the seventh consecutive year among the 10 best global brands in the world alongside giants like Apple, Amazon, and Google. It's the only European luxury brand on the top ten list. I think that speaks volumes about this brand's excitement.

You studied mechanical engineering at university but have steered your career toward finance roles at Mercedes-Benz. How did that happen? What advice would you give those who may feel "trapped" by their degree?

During the management trainee program, I worked with our procurement staff on a project, and at the end of the program, they asked me if I would be interested in joining the purchasing department. I said yes and have actually never worked as an engineer at Mercedes-Benz.

I quickly realized that although my technical background was an advantage, it wasn't enough, and I needed to acquire more business administration and economics skills. That's why I went back to university. I decided to pursue a diploma in Business Administration while working. It was an interesting experience, and I realized I could leverage my technical skills and combine them with my newly acquired business administration knowledge.

Studying while working was tough, especially as my wife and I also had our first child around that time. I'm very grateful for my wife's support during that period. Her encouragement and my own determination were what helped me succeed.

To those feeling trapped by their degree or in their career, I'd say while a diploma or degree is important, it's just the door opener. Beyond that, everything is possible.

Engineers need to combine technical skills with innovative and creative thinking – do you believe innovation and creativity are inherent skills, or can they be taught and improved? If the latter, how have you worked to improve these skills?

While some people might be gifted with creativity at birth, it can also

be learned. Mercedes-Benz encourages people to bring up new ideas and explore the feasibility of those ideas together. In fact, my team members are currently organizing a creativity workshop for the finance department that will help us find new ways to streamline our processes and come up with new ideas for improvement.

Innovation is in our DNA. To foster creativity, we work to create a supportive environment for all employees. Encouraging creativity is really important in this process. A key aspect is promoting an open company culture that welcomes new ideas – you never know where a new idea will lead you. To support this, we implement processes that drive innovation and creativity, such as design thinking and creative workshops. These efforts help us continuously improve and reach new heights.

Do you have any tips for how to best utilize your network?

There is no specific secret to building and maintaining a strong network, but regular efforts and consistent catchups are essential. Staying in touch, whether in person or virtually, is crucial. During the pandemic, virtual catchups became more prevalent, and I still have virtual coffees to keep in touch with people.

When you're working at a global company like Mercedes-Benz, reaching out to colleagues in other markets and sharing ideas and experiences is crucial. Regular communication with other colleagues and markets has enabled me to exchange and export good ideas, which is important in a high-performing organization.

How does Mercedes-Benz work to promote road safety also in Taiwan?

We work with both passive and active safety systems. Passive safety systems mitigate harm during an accident, while active safety systems aim to prevent accidents from occurring.

An example is the anti-lock braking system, or ABS, which we developed together with Bosch. Mercedes-Benz was the first to equip its cars with this technology.

Another example is the PRE-SAFE

system, which anticipates a collision and promptly activates its features to reduce the effects of the impact. Mercedes-Benz introduced it 20 years ago, a milestone we recently celebrated.

Other safety features include blind spot detection, autopilot, and our new Intelligent Drive, which can sense over 160 feet ahead and read the surrounding environment over 1,640 feet ahead. Our ambition is to protect the safety of all road users.

In Taiwan we promote responsible driving and offer designated driving services through our CRM tool, Mercedes-Benz Pass, in partnership with the taxi company 55688. Their drivers receive training at our Mercedes Training Center and are familiar with our cars, which helps customers feel assured that their cars will be managed properly. This service can be easily booked via mobile and provides a safe, convenient way to get home after a night out.

What prospects do you see for the auto industry in the next few years? What new features and products does Mercedes-Benz have in the pipeline?

We have a lot in the pipeline, including measures for decarbonization, digitization, and the in-car experience. Mercedes-Benz has globally set itself the ambition of carbon neutrality along the entire value chain in the new vehicle fleet by 2039, partly including offsets.

Our own production plants have been carbon neutral since 2022, partly including offsets, but by 2039 we will include our suppliers in net neutrality. By 2030, Mercedes-Benz will sell only electric vehicles where market conditions allow. We will have six electric car types in the Taiwan market by the end of 2023.

The digitization aspect includes driver assistance systems, improved interiors, and automated driving. Mercedes-Benz recently achieved Level 3 certification of conditional automated driving in Nevada – the first OEM to do so – with California following shortly. This means the car is in control, allowing the driver to take their hands off the wheel and eyes off the road under certain conditions. Mercedes-Benz also received this certification in Germany last year.

We're also developing a new operating system, the Mercedes-Benz OS, set to launch in 2024. This will further digitize the in-car experience and elevate the customer experience with new features. That's one of the things that will bring us closer to our ambition to lead in car software, and that will enable us to bring automated driving to the next level.

What are the biggest challenges faced by the auto industry at the moment?

The current chip shortage is an industry-wide challenge that will hopefully be solved soon. The chip shortage has impacted Mercedes-Benz, alongside many other disruptions in the past two years. We hope for a quick return to stability to reduce customers' waiting time.

Decarbonization is a very tough challenge, and we need the commitment of everyone in the value chain, including our suppliers. Raw materials like green steel need to be available. There is a full array of challenges connected to this issue, but we are confident that we can overcome them.

What advice would you like to give young professionals looking for a successful career similar to yours?

Stay curious and hungry. Dare to ask and take the lead to steer your own career. Gather people around you with a positive mindset who encourage you along the way. Most importantly, you need to believe in yourself, in your abilities and capabilities. You will get there.

What do you like to do to relax and recharge?

When I'm not working, I enjoy spending quality time with my family and friends. I also like to unwind by reading a good book or going for a run. My intercultural background has sparked a love for traveling and discovering new countries, cultures, and places.

The pandemic has put a stop to our traveling, but my family and I are looking forward to exploring the region now that borders have reopened and the situation is improving. There are still many countries on our list, and we can't wait to visit them soon.

TAIWAN BUSINESS TOPICS

*Taiwan's leading
bilingual business
publication.*



anytime, anywhere.

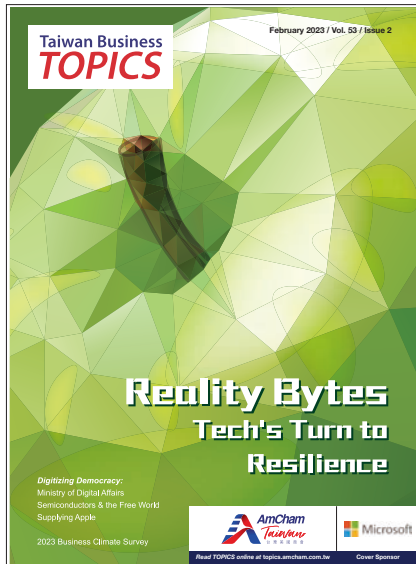


Scan me

Subscribe to receive the
latest news in your inbox.
topics.amcham.com.tw



Are You Reading a Borrowed Copy?



The cost of a year's subscription to *TOPICS* is so economical – NT\$1,500, or roughly what you might pay for a single business lunch – that there's no need to rely on your friends or colleagues to see the magazine. As a subscriber, you'll have your own copy mailed directly to your home or office, ensuring that you don't miss any of the important information carried in *TOPICS*.

Subscribe now to make sure you never miss an issue.

Make sure of getting a copy by filling in the subscription form below.

Fill out this form and post or fax to 886-2-2718-8182 with your payment or receipt. AmCham will begin your subscription upon receipt of payment.

Subscriptions

Taiwan
HK/PRC

☐ 1 year = NT\$1,500
☐ 1 year = US\$68

Elsewhere in Asia
USA/Europe

☐ 1 year = US\$75
☐ 1 year = US\$90

Name: _____ Membership ID#: (if applicable) _____

Company: _____ Telephone: _____

Mailing address: _____

Email Address: _____

☐ Bill to Account (members only) ☐ AMEX ☐ Master ☐ VISA ☐ Check ☐ Telegraphic Transfer

Credit card number: _____ Cardholder's name: _____

Expiration date: _____ Total amount (NT\$/US\$): _____

Signature: _____ Date: _____

- Please make checks payable to: American Chamber of Commerce in Taiwan
- Please direct telegraphic transfers to: American Chamber of Commerce in Taiwan Acct. #: 018-1-093665-6 Standard Chartered Bank, Tunpei Branch (Please fax your transfer receipt to AmCham.)



**SMART
MANUFACTURING**



**SMART
MOBILITY**



**SMART
MEDTECH**



**SMART
DATA-AI**



**WORKFORCE
DEVELOPMENT**

**Global
ADVOCACY**

Sustainability

Mit MARKET
INTELLIGENCE
TEAM

**1000+
STANDARDS**

**THOUGHT
LEADERSHIP**

SEMICON

**TECH
COMMUNITIES**

**SEMI
UNIVERSITY**

**Cyber
Security**

Connecting Semiconductors and Electronics

About SEMI:

SEMI connects more than 2,500 member companies and 1.3 million professionals worldwide to advance the technology and business of electronics design and manufacturing. The breadth and depth of our events, programs and services help members accelerate innovation and collaboration on the toughest challenges to growth.



SEMI.org



LINE@



Facebook



LinkedIn