

- (2) TV home shopping: Enhance distribution channel's competitiveness by listing more branded products from overseas, cultivating fan bases on social platforms, such as Facebook and LINE, and cooperating with e-commerce suppliers to expand product offerings.

2. Long-term plan

- (1) E-commerce: Increase market share to further dominate B2C market by implementing a multi-channel sales strategy, optimizing search functions, facilitating short-chain logistics efficiency and improving user experience and user interface.
- (2) TV home shopping: Take a pro-active approach in raising momo's brand image, further exploit Southeast Asia's TV shopping market, export best-selling products across multiple countries, leverage the group's marketing resources and sales channels to enhance operating efficiency, and provide innovative services through mobile and cloud platforms.

Market and Sales Overview

Market analysis

Consumer Business Group

1. Main products and service areas

The Company provides mobile services nationwide, covering Taiwan and the outlying islands of Kinmen and Matsu.

2. Market status

The penetration rate for mobile subscription reached 124% at the end of 2019. Despite a mature market, prospects are bright for 5G given rapid innovations in and increasing demand for IoT, mobile services, mobile broadband demand, smart devices and value-added services.

3. Competitive advantages

- (1) Diversification strategy

The Company integrates telecom, cable and e-commerce to provide diversified telecom bundle plans and increase user stickiness through cross-selling.

- (2) Universal service for digital convergence

The Company provides customers with a universal service for digital convergence, such as myVideo, MyMusic and myBook.

4. Opportunities and challenges

Positive factors

- (1) The rapid growth in 4G adoption has altered the landscape for mobile internet, enriching the variety of value-added services and bringing a massive influx of data on consumer behavior that promises huge business opportunities.
- (2) Taiwan has become an aged society and consumers have become even more health conscious. The Company is looking for partners in the wearable, IoT and health-related domains to create a health-IOT ecosystem.

Negative factors

- (1) Changes in how consumers communicate have placed telecoms' voice revenue under pressure.
- (2) 4G unlimited data rate plans have become the mainstream, limiting growth in mobile services, while the cost of investing in 5G spectrum is high.

Countermeasures

- (1) The Company maps out strategies based on big data and concentric diversification.
- (2) Based on the diversification strategy, the Company provides diversified mobile bundle plans and proactively develops innovative value-added services to boost overall mobile service revenue.

Enterprise Business Group

1. Main products and service areas

EBG provides international services in 247 countries. As of the end of 2019, its roaming services covered the following: 3G: 183 countries, 353 networks; 4G: 107 countries, 180 networks.

2. Market status

Enterprise clients still need voice, data and internet services for their operation. Revenue from services related to mobility, IoT, information security, cloud applications and ICT total solutions has potential to grow significantly.

- (1) Mobile and data services: Given the rising demand for enterprise data access, revenue from IP VPN and Metro Ethernet should remain the main contributor.
- (2) Cloud and IoT services and information security: As the rapid development of enterprise cloud services and IoT has made enterprises more vulnerable to security attacks, regulators are seeking to expand information security rules to combat such attacks. TWM is working with top partners to integrate different cloud and IoT solutions, which should boost the number of clients and lift revenue.
- (3) Enterprise integrated solutions: The 5G rollout has begun and TWM has formed alliances with leading partners from different industries to provide comprehensive enterprise integrated solutions, including mobile applications, IoT, AI, AR/VR and big data applications, security and vertical solutions. These should boost telecom service revenue.
- (4) Voice and internet services: Enterprise demand for fixed lines for local and international calls and the unit price for fixed-to-mobile calls are both expected to continue declining because of rising competition from VoIP and mobile services and the NCC's introduction of mobile termination rate cuts. In contrast, enterprise demand for high-speed internet access service has been rising. However, fierce competition would result in moderate revenue growth.

3. Competitive advantages

- (1) Premium brand equity: The Company provides customer-centric quality services. TWM Business Solution is readily associated with Taiwan Mobile and has won recognition among major enterprises.
- (2) Professional management team and efficient support group: Information security and backup frameworks are key considerations for enterprises adopting an IP-based network. EBG fills this need, having won certifications from EuroCloud Star Audit (ECSA) and Cloud Security Alliance (CSA). Its cloud IDC is the first and only data center in Taiwan to have been awarded Uptime Tier III certifications for design, construction and operational sustainability.
- (3) Customized integrated solutions: Based on enterprise clients' needs, TWM provides customized, one-stop-shopping integrated solutions.
- (4) Expanding resources from international alliances: The Company is the sole Taiwanese member of the Bridge

Alliance, the largest mobile alliance in the Asia-Pacific region with a combined customer base of about 340 million, and cooperates with other leading telecom operators in the alliance to integrate more services and solutions.

4. Opportunities and challenges

Positive factors

- (1) Technology, communication and integration capabilities are critical to forming strategic partnerships to develop enterprise clients.
- (2) Enterprise demand for bigger fixed-line and wireless bandwidth to transport more data and develop more IoT applications should ensure steady demand and revenue growth.
- (3) Tractica forecasts that revenue generated from the direct and indirect application of AI software would grow from US\$5.4 billion in 2017 to US\$105.8 billion by 2025. This represents a significant growth curve for the forecast period with a compound annual growth rate (CAGR) of 44.73%. As AI activities continue to grow, cloud computing, big data transportation, cloud deployment solutions and high-speed computing will be needed. The AI high-speed computing platform Taiwan is well-positioned to benefit from this growth.

Negative factors

- (1) The local loop bottleneck is a major obstacle to fixed-line operators' business expansion, as market leader Chunghwa Telecom continues to dominate with its last mile advantage.
- (2) Industrial and geographical boundaries have become increasingly blurred because of digital convergence. Domestic telecom operators face tough challenges from transnational large-scale content and cloud service companies.

Countermeasures

TWM is continuously developing IoT application services, integrating key 5G capabilities, high-speed broadband, and low-latency, high-reliability, and high-density IoT to support enterprise clients in boosting their operational efficiency. Aside from cooperating with existing business partners, TWM is forming alliances with new partners in different fields. The Company will continue to promote and develop diversified enterprise services and applications, including cloud, AI, IoT, information security and ICT total solutions to create more value and bolster client loyalty.

Home Business Group

1. Main products and service areas

TWM Broadband's main service areas are New Taipei City's Sinjhuang and Sijhih districts, Yilan County and Kaohsiung's Fongshan District among others.

2. Market status

- (1) Cable TV

Taiwan's CATV penetration rate has reached over 60% of households, according to NCC data. Watching TV is a major leisure activity in Taiwan – one that is relatively unaffected by fluctuations in the economy. However, intensifying competition from new cable multiple-system operators (MSO), Chunghwa Telecom's MOD system and the emergence of diverse OTT content providers has affected market pricing.

- (2) HD digital TV and broadband internet access

Thanks to rich HD content, stable and quality signals, expanding platforms for viewing TV programs and rapid development of online video services and social media, the high demand for HD digital TV and high-speed broadband Internet access should continue to increase.

3. Competitive advantages

- (1) TWM offers high-speed broadband network transmission which, coupled with its rich digital content and value-added services, should drive digital TV revenue growth.
- (2) The Company can leverage off the group's rich and varied resources to offer innovative digital convergence products and services.

4. Opportunities and challenges

Positive factors

- (1) High-speed broadband internet service has become the mainstream.
- (2) Demand for multi-screen viewing of video content has increased, demonstrating the growing importance of digital convergence for families.
- (3) Based on smart home applications, TWM leads the industry in launching comprehensive services, such as A1 Box and HomeSecurity service for communities.

Negative factors

- (1) At its 840th meeting on Jan. 23, 2019, the NCC approved proposed changes to Chunghwa Telecom's operation of its multimedia content transmission platform, allowing the company to form its own channel packages, as well as add or remove channels, for its MOD system. The changes place cable TV operators at a disadvantage as they must still obtain the NCC's approval to switch channels, while their pricing schemes have to be reviewed by city/county governments on an annual basis. This unequitable competition could have an impact on the cable TV industry's future.
- (2) With the NCC allowing cable system operators (SO) to expand their service areas, new entrants might resort to cutthroat pricing to grab market share, increasing the risk of subscriber losses for Taiwan Mobile.

Countermeasures

- (1) TWM Broadband is observing developments in Taiwan's digital content industry and global industry trends, focusing on providing a richer assortment of digital channels and connected TV content.
- (2) To meet market demand, TWM Broadband launched 1Gbps high-speed broadband service and A1 Box, an open platform integrating cable TV channels and diverse OTT content. TWM plans to extend interactive applications and voice control services in the near future.

Retail Business

1. Main products and service areas

momo mainly provides e-commerce and TV home shopping services in Taiwan, mainland China and Thailand.

2. Market status

B2C e-commerce topline growth is accelerating, bolstered by share gains from offline and continued expansion in mobile and streaming platforms.

3. Competitive advantages

- (1) Scale benefit: momo is the largest B2C e-commerce operator in Taiwan. Thanks to its strengthened market position, its bargaining power has increased, and more first-tier brands are doing direct business with momo, broadening its offerings of high-quality products.
- (2) Solid reputation: momo has built a solid reputation with suppliers and customers in the TV home shopping industry. Besides winning customers' confidence, momo has enhanced suppliers' willingness to entrust their brands to the Company, boosting its diverse range of products.
- (3) Strong support from the group: momo is able to leverage the resources of affiliates – including TWM's mobile, fixed-line and CATV businesses – to create opportunities in digital convergence, mobile platforms and mobile payment mechanisms.

4. Opportunities and challenges

Positive factors

- (1) Mobile usage time and mobile shopping continue to increase.
- (2) E-commerce should continue to benefit from the low penetration rate of online shopping in Taiwan.

Negative factors

- (1) High product homogeneity and intensifying market competition have led to margin pressure.
- (2) Risk management of product quality and food safety are increasingly important as momo's scale continues to increase.

Countermeasures

- (1) momo has an extensive system of suppliers and a professional product development team. This facilitated its expansion into mobile and streaming platforms, as it already has a trove of best-selling products to tap into, which not only prolonged their product life cycle, but also increased sales volumes and differentiated it from the competition.
- (2) momo has an online shopping mobile app to tap into the mobile commerce market and optimize customer experience. By promoting limited time and live-stream promotions, momo is able to reach more consumers and stimulate buying willingness. The mobile platform also offers convenience, encouraging consumers to increase their shopping frequency.
- (3) momo has a quality control team that visits factories to ensure that suppliers meet manufacturing safety standards. It also outsources product testing and examinations to ensure that raw materials and ingredients, as well as labels, comply with food safety standards.
- (4) momo has enforced measures to filter out controversial or risky products and clearly define obligations between supplier and the company if and when fined.

Main features and production process of major products:

The Company provides wireless/fixed-line telecom services, digital TV subscription, cable broadband, e-commerce/TV home shopping and integrated information/communication services.

Supply of raw materials: Not applicable as the Company is not a manufacturer.

Major suppliers and customers in the past two years

- A supplier/customer that accounts for at least 10% of consolidated procurement/revenue

1. Major suppliers

Unit: NT\$'000

	2018				2019			
	Company	Procurement amount	% of consolidated procurement	Nature of relationship	Company	Procurement amount	% of consolidated procurement	Nature of relationship
1	Company A	7,094,670	11	Third party	Company A	11,149,249	15	Third party
	Others	55,601,722	89		Others	63,711,059	85	
	Total	62,696,392	100		Total	74,860,308	100	

2. Major customers: Not applicable as the Company's revenue from a single customer did not exceed 10% of its total operating revenue.

3. Reasons for variation

Procurements from suppliers varied as the Company purchased handsets from different vendors to meet its business development needs and market demand.

Production volume in the past two years: Not applicable as the Company is not a manufacturer.

Sales volume in the past two years

Services		2018		2019	
		Sales volume	Revenue (NT\$'000)	Sales volume	Revenue (NT\$'000)
Mobile	Mobile services ('000 subs at year-end)	7,266	47,890,846	7,178	43,133,841
Domestic fixed telephony	Local calls ('000 minutes) ¹	262,751	469,171	240,493	447,730
	Long distance calls ('000 minutes) ¹	96,074	74,391	84,381	65,883
International fixed telephony	International calls ('000 minutes) ¹	126,916	1,357,753	82,466	1,065,964
Fixed-line data transmission ('000 lines)		190	2,441,281	209	2,485,298
Sales revenue ²		NA	58,023,078	NA	68,983,292
Others		NA	8,475,808	NA	8,238,905
Total			118,732,328		124,420,913

1: Outgoing minutes only.

2: Including retail sales of handsets, accessories, IT products and 3C home appliances.