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Taiwan Innovation 2012

Marching onward with High Hopes

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The Industrial Development Bureau (IDB), Ministry of Economic Affairs (MOEA) is dedicated to Taiwan's industrial development. With the core values of "Professional, Efficient, Dynamic and Innovative," the Bureau provides comprehensive services based on the needs of industrial companies in Taiwan to support companies to pursue innovation and transformation, strengthen corporate management, improve productivity and competitiveness and adapt to changes in the business environment.



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AT A GLANCE

THE STATE OF INNOVATION IN TAIWAN

The current state of innovation is strong. Taiwanese companies are generally spending more time and capital on innovation-related activities than the previous year. Most Taiwanese companies prioritize innovation as one of their core strategies with the aim of gaining long-term advantages.

TOP 20 MOST INNOVATIVE COMPANIES IN TAIWAN

Technology and telecommunication companies still dominate the list. Most of the Top 20 companies are nominated for their innovative products or services. Commitment of top management is widely considered to be the major driving force to achieve successful innovation.

INNOVATION brings together imagination, inspiration and invention to deliver products and services of enhanced value to customers. Whether the goal is to develop products that are entirely new or just making incremental changes to existing products, expand customer base or improve sustainability, companies around the world perceive innovation as one of the key drivers to grow and to outperform their competitors in today's highly turbulent environment.

The Boston Consulting Group (BCG) has developed and conducted the Most Innovative Companies Survey since 2004, with the intention of helping executives to understand the state of innovation. In 2011, in accordance with the Taiwanese government's commitment to making Taiwan a global innovation center, the Industrial Development Bureau, Ministry of Economic Affairs (MoEA) and China Productivity Center (CPC) initiated the first Most Innovative Companies Survey in Taiwan, conducted and presented jointly by BCG and Business Next Magazine.

Our 2012 survey of more than 1,000 executives provides further insights into Taiwanese companies' perspectives and strategies to bring their ideas to life. This report summarizes the findings from the 2012 survey, including executives' current innovation strategies, time and financial investments in innovation over the year, evaluation of innovation performance, and management of innovative projects.

We also present the Top 20 Most Innovative Companies in Taiwan, which incorporates the ranking by executives and industry experts weighted to the companies' three-year revenue growth, profit growth, and shareholder returns. (See Survey Methodology section for details.)

The State of Innovation in Taiwan

I. Overall landscape

The state of innovation in Taiwan is strong. A prevalence of high tech firms, together with prioritization of innovation by senior management, offers enormous space for Taiwanese companies to grow further with their ideas. Executives of Taiwanese companies are hopeful about the future. Time and capital investments in innovation-related activities have increased from the previous year. The major criteria for success have shifted from sales contribution of new products and services to customer satisfaction and overall revenue growth. Compared to our study in 2011, however, Taiwanese companies are less satisfied with the financial return from their investments in innovation.

Innovation continues to be one of the most prioritized items on executives' agenda across all industries in Taiwan

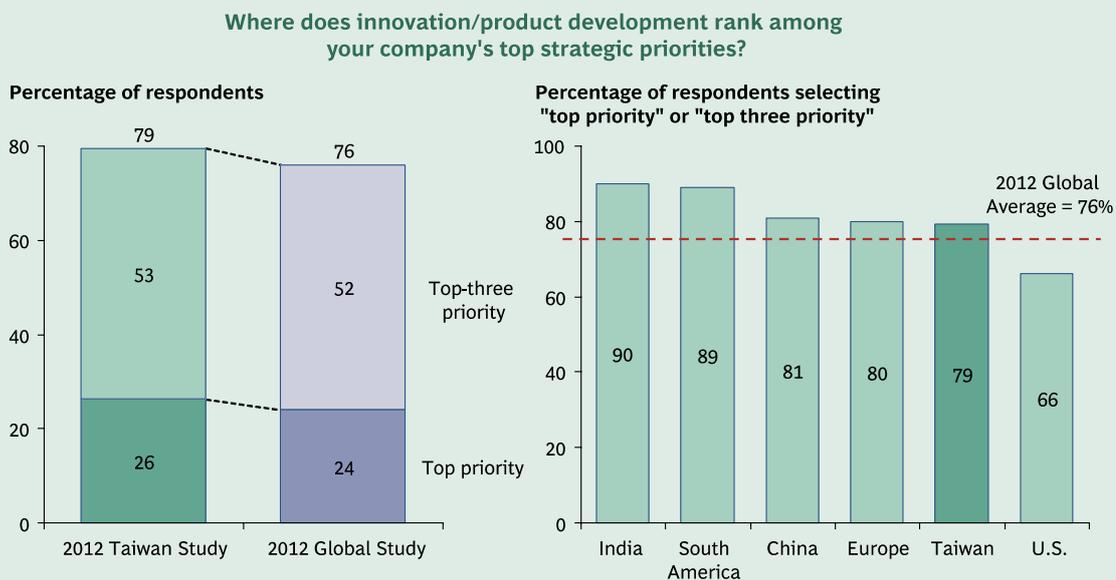
This shows that although Taiwanese executives place a premium on and are willing to invest in innovation, they hope to develop better innovation-to-cash abilities.

II. Innovation and Product Development Strategies

Innovation as top priority: Taiwan ahead of global average

According to the survey, innovation continues to be one of the most prioritized items on executives' agenda across all industries in Taiwan. Seventy-nine percent of respondents ranked innovation among their companies' top three strategic priorities—placing Taiwan ahead of the global average of seventy-six percent. Twenty-six percent of respondents selected innovation as their first priority. (See Exhibit 1.) Compared to the 2011 survey, increased prioritization is observed in nearly all industries of Taiwan, including industrial and manufacturing (rising from 25% last year to 29% this year), retail (from 21% to 27%), and financial services (from 8% to 21%). According to eighty-eight percent of respondents, company owners and chief executives are the biggest driving force of innovation.

EXHIBIT 1 | Close to Eighty percent of Taiwanese companies consider innovation a top three strategic priority



Source: BCG 2012 Taiwan Innovation Survey, BCG 2012 Global Innovators Survey

Current innovation strategies: over-investing in existing customer groups; under-investing in sustainable growth

While prioritization of innovation is a common theme resonating throughout Taiwan, Taiwanese companies have set varying goals as they bring innovative ideas to fruition. Our survey results show that many companies base their innovation strategies on developing products and services to satisfy new (29%) and existing customer groups (21%). Interestingly, Taiwanese companies' current strategies do not necessarily reflect the factors they consider critical to future success. For instance, though twenty-one percent of respondents tailor their strategy to bringing values to existing customers, only seventeen percent view these customers as key to future success. In a contrary case, despite the fact that only seventeen percent of respondents selected "improving sustainability" as their primary innovation strategy today, twenty-five percent believe sustainable growth will end up determining their fortune. Taiwanese companies are over-investing in current products and existing customer groups while under-investing in developing and improving the sustainability of new products and services.

Introducing and commercializing innovation

In Taiwan, over sixty percent of new ideas for growth come from external sources, such as customer suggestions (33%) and competitive intelligence (31%). While internal sources account for only a quarter of all innovative ideas, sixty-one percent of new ideas and projects are commercialized through internal sources, surpassing joint venture with external strategic partners (35%) and outsourcing to product launch firms (2%).

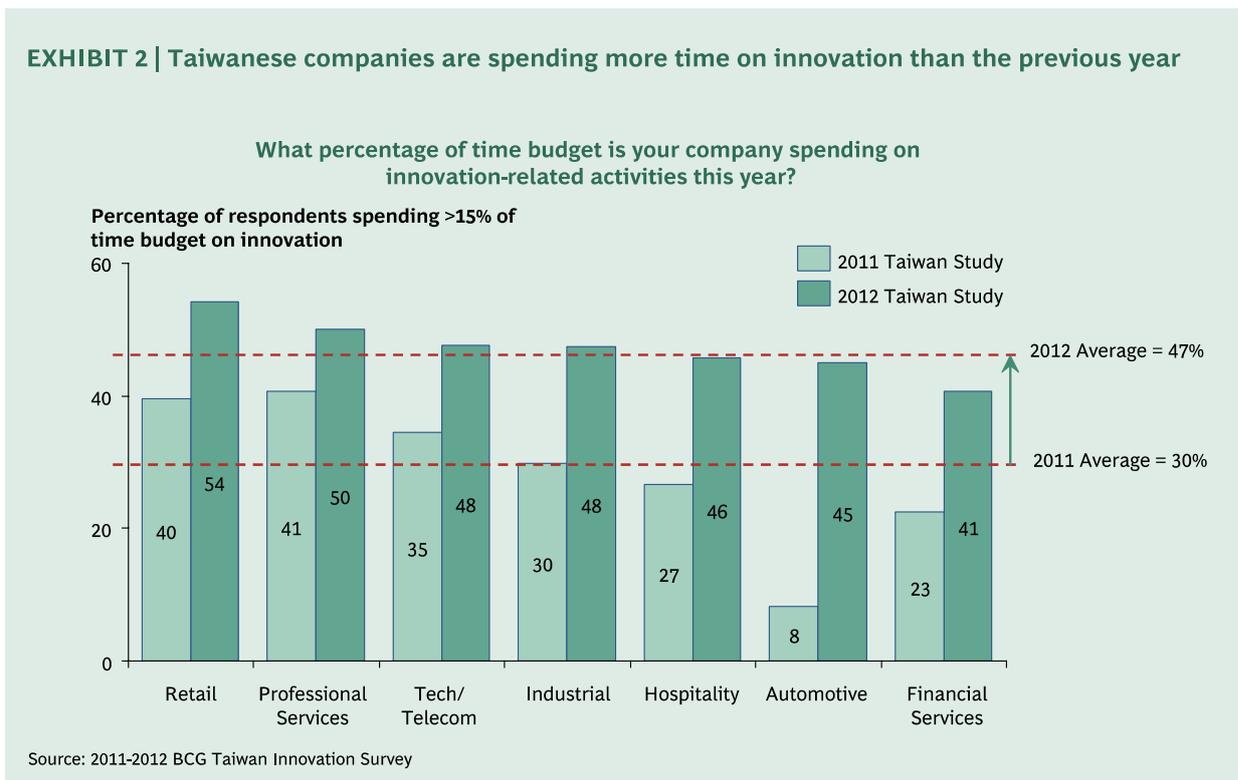
III. Investing in Innovation

Time investment: a huge leap

Taiwanese companies are spending more time on innovation-related activities than the previous year. Forty-seven percent of companies have altogether spent 15% or more of their overall time budget on innovation—seventeen percent more than in 2011. Companies' time investment in innovation has increased across all industries in Taiwan, including retail (from 40% to 54%), technology and telecommunication (from 35% to 48%), industrial and manufacturing (from 30% to 48%), and financial services (from 23% to 41%). (See Exhibit 2.) Only seventeen percent of companies are spending less than 5% of their time on innovation, five percent fewer than the previous year.

Taiwanese companies are spending more time on innovation-related activities than the previous year

EXHIBIT 2 | Taiwanese companies are spending more time on innovation than the previous year



Financial investment: spending more, aiming higher

In addition to time investment, Taiwanese companies are also investing more capital in innovation than they did the previous year. Fifty-seven percent of respondents have increased their capital spend on innovation, among which twenty-one percent have significantly increased their investments by over 10% from last year. While ten percent of the companies are investing in innovation with the hope of catching up to competitors' offerings and fifteen percent aim to sustain current competitive advantages, sixty-six percent of the companies are aiming to create new sustainable and long-term advantages.

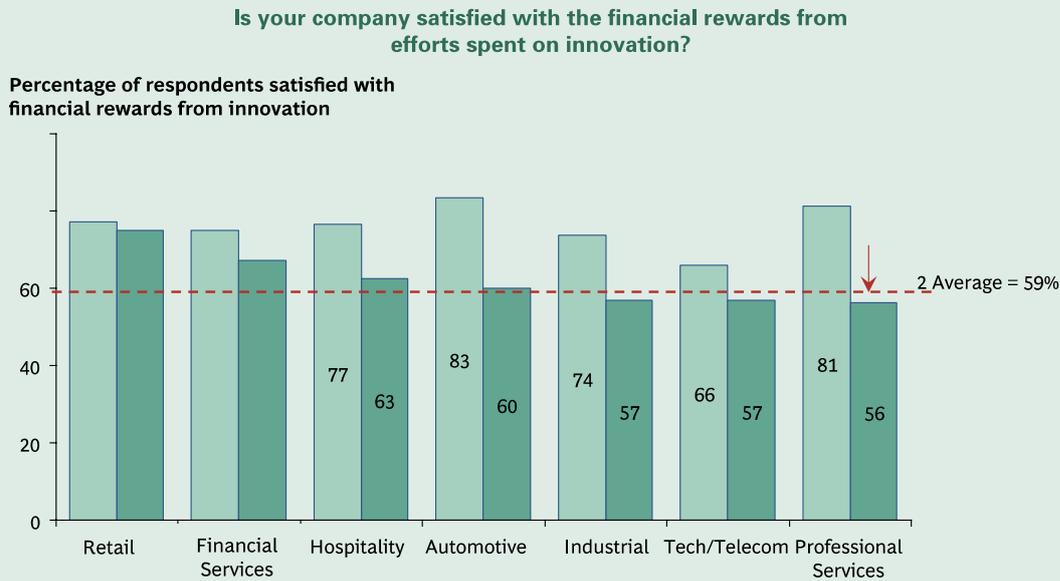
IV. Evaluating and Assessing Innovative Projects

In the 2011 study, Taiwanese companies listed "percentage of sales from new products or services" and "higher profit margin" as the major criteria for measuring their success with innovation and product development. In contrast, our study this year reveals that Taiwanese companies have become more aware of customer satisfaction and overall revenue growth.

Compared to 2011, Taiwanese companies are significantly less satisfied with the financial rewards from their innovation efforts, with the average satisfaction level dropping from seventy-two percent last year to fifty-nine percent this year. Decreased satisfaction level is observed across all leading industries in Taiwan.

Taiwanese companies are significantly less satisfied with the financial rewards from efforts spent on innovation

EXHIBIT 3 | Compared to 2011, fewer Taiwanese companies are satisfied with innovation payback



Source: 2011-2012 BCG Taiwan Innovation Survey

Managing Innovation and Product Development

In this year's study, BCG investigated the execution and management of projects that enable Taiwanese companies to bring innovative ideas to reality.

Initial project definitions: clear objectives, vague financials

Though most Taiwanese companies (79%) have well-defined project objectives and timelines at the project initiation stage, forty percent of them lack a well-defined budget, and more strikingly, forty-seven percent do not assess the financial benefits of a project at its earliest phases.

Project team: prioritizing talent and functionality

When it comes to assembling the project teams, about sixty-four percent of the Taiwanese companies believe that the teams should be staffed with people who have the relevant skills, and fifty-four percent believe that the teams should be representative of all relevant functional groups in the company. Company executives are less concerned about whether or not the team members are committing full-time to the projects (39%), working at the same location (35%), or staying on the project team for too long (4%).

Project management: insufficient standard processes, constant change

As they pursue innovative projects, only a small number of Taiwanese companies have standard processes to monitor their progress and re-assess their

Only a small fraction of Taiwanese companies have standard processes to monitor the progress and re-assess the viability of the projects

viability. According to the survey, only forty-six percent of companies adopt a standardized process to regularly review the progress and output of projects. Moreover, only twenty-four percent have a standardized process that enables top management to terminate unsuitable or unsustainable projects.

Taiwanese companies frequently change the contents of their innovative projects: forty-one percent make frequent changes to project timelines, nineteen percent alter project specifications, and fifteen percent adjust the priorities within projects.

Key challenges: introducing ideas and retaining talent

Finding new ideas (25%) and hiring and retaining talent (15%) are the key challenges that Taiwanese companies will face in the next five years.

To strive for new ideas and continuous improvements, fifty-six percent of respondents said that encouraging their employees to try out new ideas and allowing them to make mistakes would be the most effective method. Establishing designated departments for innovation (35%) and having reliable processes to evaluate innovation (31%) are also seen to facilitate innovation and product development.

V. Making the Most out of Innovation

From BCG's case experience and analysis, the following eight traits are observed among the "best in class" innovative companies around the world:

- *Strategic alignment:* Clear alignment between innovation strategy and business strategy
- *Leadership support:* Senior leadership that is bought-in and committed to innovation's importance
- *Organizational alignment:* Innovation objectives, organizational structures, roles and responsibilities, governance and incentives all pointing in the same direction
- *Tools and processes:* A fast, efficient, standardized and flexible set of tools and processes that can manage complexity and move quickly from concept to commercialization
- *Metrics and feedback:* Applying standard metrics to different stages of the innovation process to measure innovation performance
- *Commitment:* Willingness to invest in learning and building competencies and recognizing some failure as a prerequisite to success
- *Risk savvy:* Ability to factor risks into decisions and to tolerate risks that are necessary to pursue breakthrough innovation

- *External focus:* Eagerness to identify and meet customer needs and aspirations

Over the past year, Taiwanese companies have continued to receive strong support from senior leadership and have invested more resources with increased optimism. Compared to companies around the world, Taiwanese companies are also more tolerant of the risks associated with innovation. However, continued prioritization and increased spending do not directly translate into better performance and higher profitability. In our 2012 study, we found that Taiwanese innovators need better strategic alignment, more standardized tools and processes, and more efficient metrics and feedback systems to be successful. The following recommendations can help Taiwanese executives in launching or redesigning their strategies as they continue to drive innovation into the future.

Allocate resources effectively. Sixty-eight percent of Taiwanese companies set their current strategies and allocate their investment to items that are not considered the most vital to their future success. From our global study, executives at leading innovators prioritize innovation projects that are aligned with business strategies and invest less in areas with fewer promising opportunities. To extract the most value from their efforts, Taiwanese executives must focus their limited resources on innovation strategies that are aligned with the future.

Involve customers throughout the process. Taiwanese executives invest in innovative projects to meet customer needs and use customer satisfaction to evaluate their success, but customers' voices are often unheard during the innovation process itself. Twenty-five percent of respondents this year selected "not enough customer insights" as one of the biggest obstacles they face when it comes to generating a return from their investments, seven percent more than last year. Putting project designers in customers' shoes and having the proper channels to acquire customer feedback are central to successful innovation.

Define project financials at launch. Although Taiwanese companies execute their innovative plans in different ways, over forty percent of the companies have one feature in common—lack of budget and financial estimates at the project initiation stage. The absence of such projections often leads to inefficient management of capital, poor evaluation standards, and consequently financial underperformance with a low satisfaction level. As companies today are using revenue growth and profit margin to assess their innovative accomplishments, the importance of well-defined project financials at the early stage cannot be overstated.

Taiwanese executives must focus their limited resources on innovation strategies that align with the future

Apply standard review processes. The adoption rate of standard review processes is low among Taiwanese innovators. Implementation of standard processes enables executives to efficiently monitor the progress of projects, clearly define deliverables at each stage of the innovation, and promptly terminate projects that are unsustainable or misaligned with corporate goals. Though changing plans is often inevitable, frequent alterations can delay the schedule and diminish the impact of innovation. Carrying out innovative projects with standard processes can reduce the frequency of changes and set a reasonable pace for innovation to progress.

Top 20 Most Innovative Companies in Taiwan

The ranking of the Top 20 Most Innovative Companies in Taiwan 2012 is presented in Exhibit 4.

EXHIBIT 4 | Top 20 Most Innovative Companies in Taiwan 2012

2012 Ranking	2011 Ranking	Company	Industry
1	1	HTC	Tech/Telecom
2	4	TSMC	Tech/Telecom
3	2	Asustek	Tech/Telecom
4	6	Wowprime	Hospitality
5	3	7-ELEVEN	Retail
6	8	Foxconn	Tech/Telecom
7	5	Yulon/Luxgen	Automotive
8	12	Mediatek	Tech/Telecom
9	9	Giant	Industrial/Manufacturing
10	-	Cheng Shin Tire/Massix	Industrial/Manufacturing
11	10	Hiwin	Tech/Telecom
12	-	Taishin Bank	Financial Services
13	16	Largan	Tech/Telecom
14	19	Chinatrust	Financial Services
15	11	Acer	Tech/Telecom
16	17	Quanta	Tech/Telecom
17	7	TPK	Tech/Telecom
18	13	Delta	Tech/Telecom
19	-	Sinyi Realty	Professional Services
20	-	Farglory	Professional Services

Source: China Credit Information Service, Taiwan Stock Exchange

Though the number of technology and telecommunication companies on the Top 20 list has dropped from thirteen in 2011 to eleven this year, technology and telecommunication companies still dominate the list and account for all of the top three positions. HTC continues to be the executives' favorite, followed by TSMC and Asustek. Traditional industries like automotive, industrial and manufacturing companies together make up fifteen percent of the list. Financial services and professional services industries each make up ten percent of the list. Cheng Shin Tire (No. 10), Taishin Bank (No. 12), Sinyi Realty (No. 19), and Farglory (No. 20) are the four new additions to the list this year, partially due to their outstanding financial performance.

The companies on the Top 20 list were mostly nominated for the following reasons: fifty-six percent of the executives and expert voters nominated companies because of their ground-breaking products or services, twenty-nine percent for their innovative operating processes, twenty-five percent because of their new and differentiated business model, and nineteen percent for the unique customer experience they provide.

Executives and industry experts believe that commitment of top management (48%), determination of the company as a whole (29%), efficient use of external resources and customer information (22%), good alignment of innovative strategies and operating strategies (20%), and tolerance of associated risks (18%) are the major factors behind successful innovation.

Highlights of Taiwan's Best Innovators

On the path of innovation, some companies have successfully turned their investments into new products and services, while others have developed new business models and organizational structures to sustain their competitive advantages. Here we list the top 10 innovators in 2012 and highlight their accomplishments.

HTC

HTC is recognized as one of the global leaders in innovation and has been selected as the most innovative company of Taiwan for two consecutive years. Over the past year, HTC has continued to develop mobile devices and user interfaces that offer exceptional customer experience. The latest HTC “One series” smartphones combine enhanced features, such as simultaneous HD video/photo capture capabilities and an immersive sound system, with faster processing speed to retain their positions as the flagship Android devices. In addition, HTC has launched the HTC Connect program that connects its smartphones to other consumer electronics for more convenient in-home and in-car entertainment.

TSMC

TSMC is the world’s largest independent semiconductor foundry. As well as introducing new technological processes to build future generations of microelectronic devices, TSMC recently adopted a unique organizational structure—appointing three executive vice presidents and co-chief operating officers to lead the company’s business groups: research and development, operations, and business development. By having each of the co-COO’s take charge of one of the business groups for six months before rotating to the next, TSMC aims to better align its business strategy as a whole and to nurture its future leadership.

Asustek

Asustek, the world’s leading manufacturer of motherboards and personal computers, regards incremental innovation and radical innovation as essential to its future success. To align its organizational structure with its innovative strategy, Asustek has established the *Da Vinci* Innovation lab, in conjunction

with its traditional research and development center, to develop products with disruptive technology. The “design-thinking” approach is widely implemented in the company developing products, such as the Eee Pad Transformer and the 3-in-1 PadFone, from the end-users’ perspective.

Wowprime

As the owner of 11 restaurant chains with nearly 300 outlets in Taiwan, Mainland China and Southeast Asia, Wowprime aims to develop into a global food and beverage giant through management innovation. Its top managers are encouraged to present new business ideas to support its expansion plan of creating one new brand per year, and store managers as well as chefs are required to propose one innovative recommendation each month to ensure ongoing improvements. In addition, Wowprime has multiple channels to acquire customer feedback, and employees with positive customer feedback receive rewards and personal greetings from the chairman.

7-ELEVEN

7-ELEVEN is the most popular convenience store in Taiwan with the highest store density. Other than providing a broad selection of products at competitive price levels, 7- ELEVEN forms alliances with various adjacent industries, including laundry and e-merchandise delivery services, to meet customer needs. 7- ELEVEN has invested substantially in upgrading its POS system to record and distribute real-time information. By collecting and analyzing this information, 7-ELEVEN is able to effectively predict buying behaviors and timely adjust the selection and pricing of products sold at each store location.

Foxconn

In addition to being one of the world's largest electronics manufacturers, Hon Hai (Foxconn) is continuing to expand its footprint as a technology company by leveraging its competitive advantages in manufacturing and forming strategic partnerships with companies in adjacent industries. Through partnerships with consumer electronics maker Vizio, Cable TV operator KBRO, and telecom giant Chunghwa Telecom, Hon Hai recently created a new market standard for low-cost 60-inch LED televisions. The company's joint venture with Sharp, producing LED panels in Japan, has enabled Hon Hai to offer its televisions at a competitive market price.

Yulon

Yulon Motor is the largest indigenous automaker in Taiwan. Over the past decade, Yulon has transformed from a vehicle contract manufacturer into a full-fledged automobile developer with its own brand, Luxgen. By partnering with HTC and other local high tech companies, Luxgen vehicles offer exclusive

features such as the Think+ integrated infotainment platform and the Active Eagle View, 360-degree surround imaging system. Luxgen vehicles are exhibited in innovative LIFE+ Showrooms, which provide fresh sales and services experiences to potential customers. Yulon's recent joint venture with Dongfeng Motor has opened the door for Luxgen to enter Mainland China, the largest automobile market in the world.

Mediatek

As Taiwan's biggest handset chip designer, Mediatek is a leading fabless semiconductor company for mobile devices. Mediatek is sustaining its competitive advantage of system-on-chip technology and venturing into the smartphone market. During the first half of 2012, Mediatek has invested nearly twenty-two percent of its overall revenue in research and development, joining TSMC, HTC, and Wistron as the only Taiwanese companies to have spent more than 5 billion NTD on product development projects. Strong financial support has fueled Mediatek's growth to become the only company of its kind to penetrate into the fields of IT, consumer electronics, and communications.

Survey Methodology

Our 2012 survey combines executive and expert respondents' votes (80% of final ranking score) with financial measures (20%) to accurately reflect the top innovators of Taiwan. Exhibit 5 shows the breakdown of the 2012 Taiwan survey respondents by industry and position.

A list of innovative companies based solely on respondents' picks was generated at the end of the first stage of the nomination process, in which executives' votes contributed to 70% of the final ranking score and experts' votes accounted for the remaining 30%. Profitable local companies on the list were selected to move on to the next stage. In the second stage, the respondents' ranking was weighted to three financial measures: three-year shareholder returns (10% of final score); three-year revenue growth (5%); and three-year profit growth (5%). Leading companies with 2011 revenue of more than 10 billion NTD were selected to move on to the final stage. The ranking of the Top 20 Most Innovative Companies of Taiwan was finalized and publicized after a final review meeting with the committee of industrial and academic experts.

EXHIBIT 5 | 2012 Taiwan Survey Respondent Demographics

Executive Voters				Expert Voters	
Industry		Position		Industry	
Industrial & Manufacturing	344	Owner, partner, chief officer	77	Professional Services	12
Technology & Telecom	312	Vice president, senior manager	161	Industrial & Manufacturing	9
Financial Services	107	Manager	529	Academia	4
Professional Services	57	Department head, spokesman	301	Financial Services	2
Retail	48				
Hospitality	24	Total	1,068	Total	27
Automotive	20				
Healthcare	11				
Cultural & Creative	11				
Other	134				
Total	1,068				

Source: China Credit Information Service, 2012 BCG Taiwan Innovation Survey

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