FMM Business Conditions Survey

WEAK 1H2025, SHARPER DOWNTURN EXPECTED IN 2H2025

Issue No. 2/2025 **Released on September 17, 2025**

KEY RESULTS:	
BUSINESS ACTIVITY – 1H2025	• Business activity weakens on softer demand, as indices fall further below 100 • Both local and export sales contract, with domestic demand lagging further • Production and capacity utilisation ease on cautious operations • Cost pressures remain high, eroding margins • Capital investment and employment hold broadly steady, underscoring resilience
BUSINESS ACTIVITY – OUTLOOK 2H2025	• Business conditions to weaken further, with confidence slipping after earlier signs of recovery • Local and export sales to soften, with exports holding only a slight edge over domestic demand • Production and capacity utilisation to remain cautious, prioritising stability over expansion • Cost pressures to stay elevated, keeping margins under strain • Capital investment plans to soften, with fewer firms pursuing expansion • Employment expectations to remain broadly stable, but with hiring momentum easing further
GENERAL BUSINESS ACTIVITY – OUTLOOK 2H2025 VS 1H2025	• Revenue outlook fragmented: 39% of respondents expect growth, 34% declines, 27% stable • Profit outlook tilts negative: 47% of respondents expect declines vs 32% gains, 21% stable
BUSINESS CONFIDENCE: STABILITY AMID UNCERTAINTY	• Respondents expect stable operations, but weak outlook for economy and demand • 46% confident in company stability; only 2% see strong gains • Nearly half (47%) expect global decline and 44% domestic decline
GENERAL	• Top 3 challenges: Resource constraints, rapid change and collaboration gaps • Top 3 opportunities: New technologies, stronger partnerships and process improvements
INDUSTRY 4.0 ADOPTION: SLOW AND SELECTIVE	• Only 32% of firms have adopted Industry 4.0 • Focus on System Integration (66%), IoT (47%) and Cloud Computing (39%) • Advanced tech (e.g., 3D printing, Augmented Reality) remains niche (<10%)
US TARIFFS: PRESSURES AND STRATEGIC SHIFTS	• 37% face significant/major impacts; 13% report losses above 30% • 48% diversifying exports; others shifting supply chains and automating • Tariffs remain a persistent cost and competitiveness challenge
SST EXPANSION: HEAVY COSTS AND COMPLIANCE STRAIN	• Nearly half (44%) face significant impacts; 11% report major disruptions • 36% produce mixed goods, increasing compliance complexity; 17% unclear on classification • Key challenges: higher service costs (59%), exemption issues (35%), Customs tariffs classification challenges (35%) • Respondents call for GST reintroduction and urge exemptions, clarity and better guidance/support from government
NEW ELECTRICITY TARIFF REVISIONS ON BUSINESS COSTS	**Impact by Category:** • 60% overall report higher costs; HV users most affected (72% HV General, 67% HV TOU) • LV General shows more stability (25% no change), but most groups face broad upward pressure
	Impact by Load Factor • Higher costs dominate, especially for load factors 0.4-1.0 (over half reporting increases) • Very low load factors (<0.2) showed mixed results: 40% higher, 28% lower, 32% no change

KEY RESULTS:	
NEW ELECTRICITY TARIFF REVISIONS ON BUSINESS COSTS	**Impact by Estimated % Change** • Most cost increases fall in the 3-15% range, especially 3-5% (26%) and 8-10% (16%) • Cost reductions, where reported, were moderate (mostly 0.1-5%)
ENERGY EFFICIENCY: ON THE RISE	• Widely adopted: efficient lighting (46%), compressed air system optimisation (29%), power factor compression (23%), VFD (21%) • Strong intent to adopt: high-efficiency motors (46%), compressed air optimisation (45%), power factor correction (44%) • Advanced measures (waste heat recovery, co-gen) remain limited but under review
RENEWABLE ENERGY	• Current adoption modest: Net Energy Metering (22%), Self-Consumption (14%), Large-Scale Solar (12%) • Strong intent to adopt solar and grid-linked schemes (~40%+ across major options)
ARTIFICIAL INTELLIGENCE	• Familiarity modest: 12% familiar, 55% somewhat, 33% not familiar • Adoption still low: only 26% have implemented AI • Top uses: chatbots (40%), inventory (35%), product development (36%), production optimisation (33%) • Benefits: Biggest gains: productivity (60%) and faster decision-making (57%) • Other benefits: resource management (36%), quality control (36%), customer experience (35%), cost reduction (34%) • Niche benefits include QC root cause analysis, fewer errors and time savings

The manufacturing sector's performance in 1H2025 weakened as business activity, sales and production indices slipped from the earlier gains of 2024, weighed down by rising costs and fragile demand. Employment levels were largely stable, while investment activity eased slightly, reflecting continuity in operations but reduced appetite for expansion.

Looking ahead, the outlook for 2H2025 turns more challenging, with all major forward-looking indices falling further. Persistent cost pressures and softer demand expectations suggest that firms are shifting from cautious consolidation to a more defensive stance, prioritising efficiency and risk management over growth.

Indicators	FMM Business Conditions Index Values							
	Current (Compared to 6 months ago)				Looking forward (Next 6 months)			
	2H2023	1H2024	2H2024	1H2025	1H2024	2H2024	1H2025	2H2025
Business conditions	89	93	98	**77**	92	106	101	**89**
Local sales	86	81	88	**69**	92	95	94	**83**
Export sales	80	85	92	**77**	89	100	97	**84**
Production volume	91	91	99	**83**	99	110	109	**91**
Capacity utilisation	91	93	96	**80**	99	108	106	**90**
Capital investment	103	107	108	**102**	110	116	116	**108**
Number of employees	98	98	98	**97**	105	105	106	**99**
Cost of production	154	155	144	**158**	159	162	167	**163**

1H2025 PERFORMANCE: A SOFTENING ENVIRONMENT

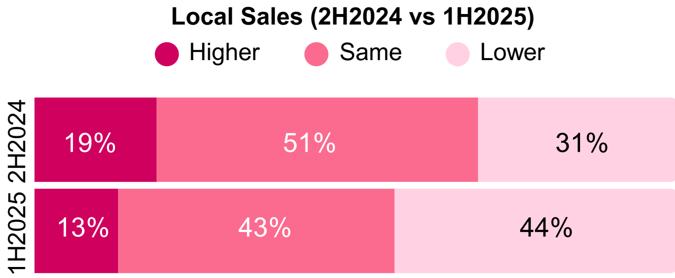
The manufacturing sector entered the first half of 2025 on weaker footing, with business activity, sales, production and capacity utilisation indicators all declining after earlier gains made in 2024. Rising costs and global uncertainties weighed on demand, pulling indices lower. While stable employment provided some resilience and capital investment eased, firms largely prioritised consolidation and stability over growth.

Business Conditions Decline as Optimism Eases

The general business activity index fell sharply from 98 in 2H2024 to 77 in 1H2025, signalling a shift from cautious optimism to renewed contractionary pressures. Only 17% of 627 respondentsreported higher activity, down from 27% in the prior period, while those reporting lower activity rose significantly from 30% to 40%. This deterioration suggests that businesses are scaling back expectations, with stability (42%) holding but expansion sentiment fading.

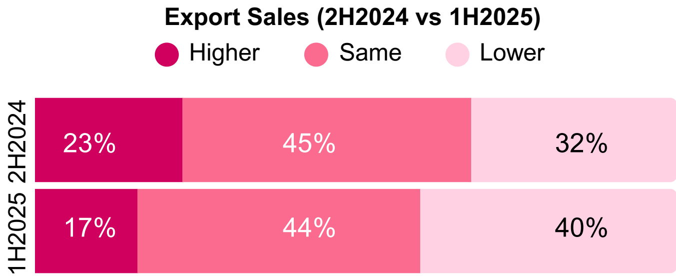
Local Sales Momentum Stalls

Local sales trends weakened, with the index slipping from 88 to 69. The share of respondents citing higher sales fell to 13%, compared with 19% in 2H2024, while those reporting lower sales increased to 44%. Although 43% recorded steady sales, the downturn highlights continued fragility in domestic demand, where optimism remains elusive and risks outweigh recovery momentum.

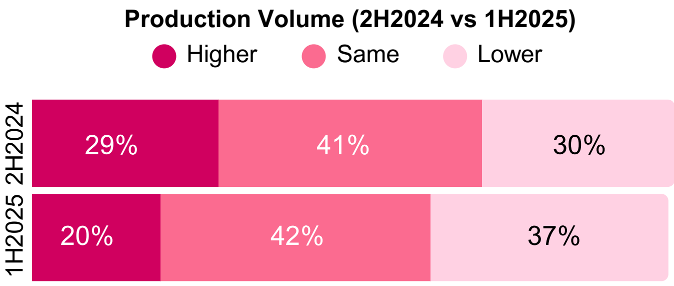


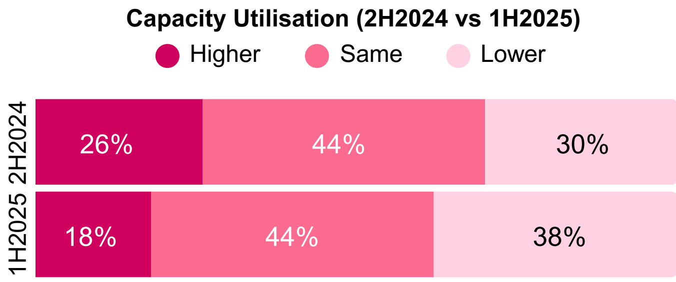
Export Sales Mirror Cautious Outlook

Exports showed a similar pattern, with the index retreating from 92 to 77. Higher sales responses edged down to 17%, while lower sales rose to 40%. Steady sales (44% of respondents) provided some balance, but the overall deterioration underscores persistent headwinds in global demand, where geopolitical and trade-related uncertainties continue to temper export confidence.



Production Volume Slows, Capacity Underutilised

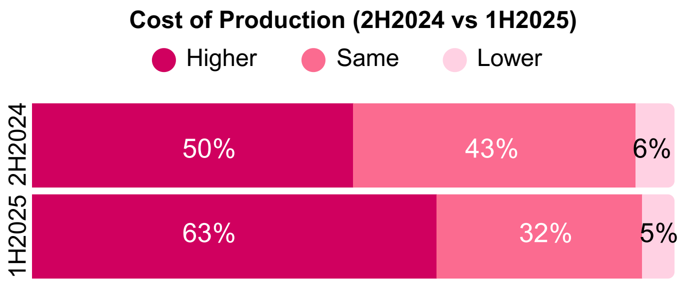




Production volume also contracted, with the index easing from 99 in 2H2024 to 83. Only 20% of respondents reported higher production, down from 29% previously, while lower production rose to 37%. Capacity utilisation followed suit, slipping to an index of 80 from 96, as fewer businesses reported expansion in capacity (18%) and more indicated declines (38%). The figures suggest that while output is still maintained, manufacturers are adjusting cautiously, holding back on fuller utilisation amid softer demand.

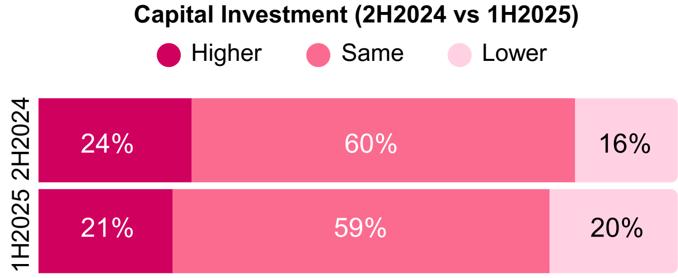
Costs Remain Elevated, Though Moderating

Cost pressures persisted, with the production cost index rising substantially from 144 to 158, remaining well above the 100-point threshold. More than half of respondents (63%) reported higher costs, though this share has eased from the 62% in 1H2024. Meanwhile, 32% cited stable costs, indicating some moderation. Elevated but stabilising input costs remain a structural challenge, limiting business expansion despite softer demand conditions.



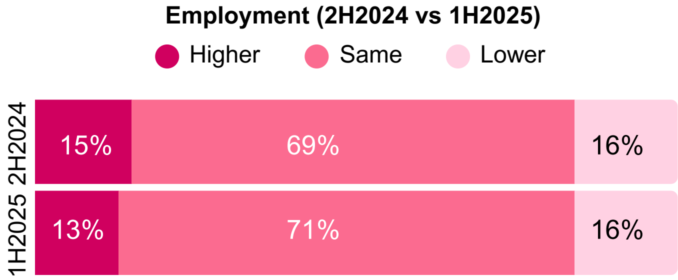
Investment Stable, but Growth Prospects Weaken

Capital investment sentiment eased slightly, with the index declining from 108 to 102. Around 21% of respondents increased investment, while 59% maintained current levels, reflecting continuity in planned spending but reduced appetite for aggressive expansion. The fall in momentum suggests that while businesses are sustaining necessary capital expenditure, uncertainty is curbing ambitious projects.



Employment Holds Steady

Employment conditions were broadly stable, with the index unchanged at 97. The majority (71%) reported no change in workforce size, while 13% expanded hiring and 16% reduced headcount, consistent with the prior period. This indicates a neutral labour market stance, where job losses have stabilised but hiring momentum is still subdued, reflecting businesses' preference to maintain workforce levels rather than expand.



OUTLOOK FOR 2H2025: PESSIMISM DEEPENS AMID COST PRESSURES

Manufacturers' expectations for the second half of 2025 point to a more challenging environment, with confidence weakening further across business activity, sales, production and capacity utilisation. All major forward-looking indices declined from the prior survey, slipping deeper below the 100 mark and signalling greater pessimism. Persistent cost pressures continue to weigh on margins, while investment and employment expectations remain steady but subdued. Overall, businesses appear to be shifting away from expansion, prioritising efficiency, consolidation and risk management amid growing uncertainty.

Expectations for general **business activity** softened, with the index falling to 89 from 101 previously. Only 23% of respondents expect higher activity, while 44% anticipate stability. The proportion expecting declines rose sharply to 34%, up from 25% in the prior survey. The deterioration suggests businesses are becoming more cautious, with optimism giving way to a more defensive stance.

Local sales expectations also weakened. The index dropped to 83 from 94, reflecting lower confidence in domestic demand. Only 19% of respondents expect higher sales, while 45% anticipate stability. The share expecting declines rose to 36%, up from 25% previously. This marks a notable shift toward pessimism, signalling that domestic demand conditions remain under pressure.

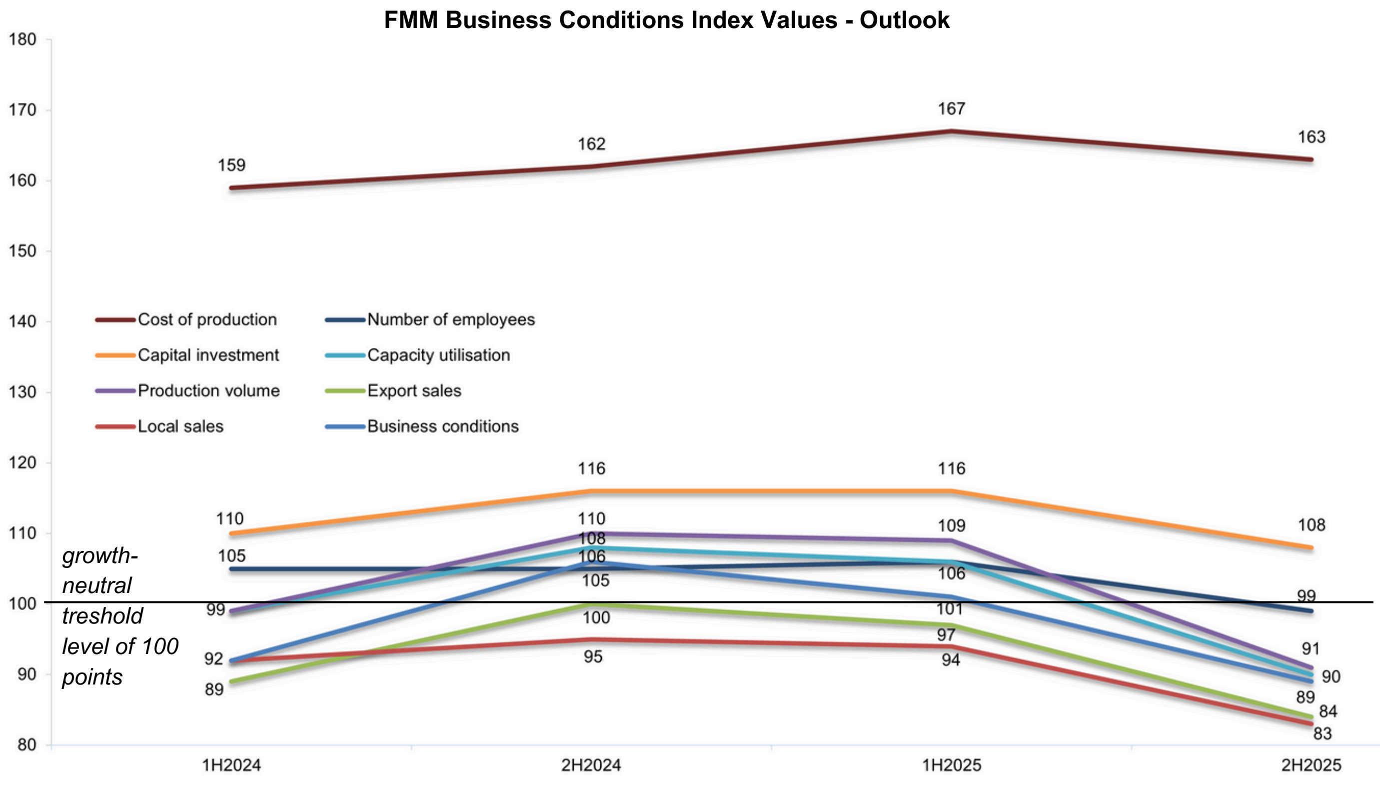
Export sales followed a similar trend, with the index falling to 84 from 97. Respondents anticipating higher exports fell to 21%, down from 23%, while those expecting stable exports held at 42%. The proportion expecting declines rose to 37%, up from 26% previously. Ongoing global trade uncertainties appear to be weighing more heavily on exporters, with confidence slipping further into negative territory.

Production and capacity utilisation also showed steeper deterioration. The production index fell to 91 from 109 previously, with only 26% of respondents expecting higher output compared with 32% previously. The proportion anticipating declines rose to 34% from 21%.

Capacity utilisation declined in parallel, with the index slipping to 90 from 106 in the prior survey. Just 24% expect higher utilisation, down from 27%, while those anticipating declines rose to 34% from 22%. These results point to weaker operating conditions and firms focusing on efficiency rather than expansion.

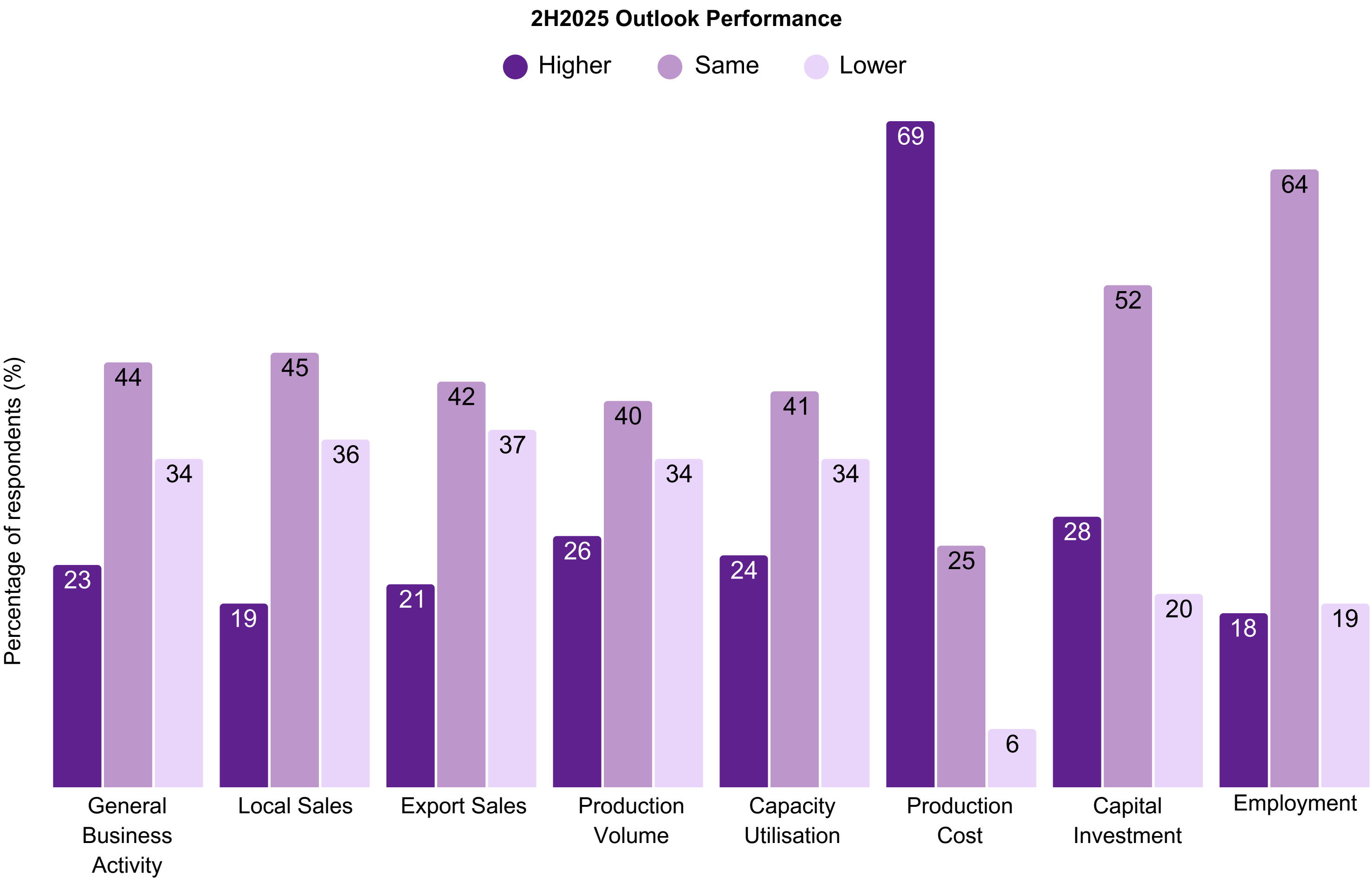
Cost expectations remain the most significant challenge. The index stood at 163, down from 167 previously but still far above balance. 69% of respondents expect higher costs in 2H2025, while only 6% foresee any relief. Persistent inflationary pressures and high input costs continue to erode margins, overshadowing any signs of recovery in demand.

Capital investment intentions softened modestly, with the index dipping to 108 from 116 previously. 28% of respondents project higher investment, but the share expecting declines rose to 20% from 16%. The majority (52%) plan to maintain current levels, suggesting that expansion plans are being reassessed in light of cost and demand concerns



Employment expectations were broadly stable but lost momentum, with the index slipping to 99 from 106. Only 18% of respondents expect higher hiring, compared with 22% previously, while those anticipating lower employment rose to 19% from 16%. The majority (64%) continue to expect no change, underscoring a holding pattern in workforce decisions.

Overall, the outlook for the second half of 2025 is characterised by deepening caution. Businesses face growing pessimism across most indicators, with sales, production and capacity outlooks turning more negative and costs remaining elevated. Investment and employment remain steady but subdued, pointing to consolidation rather than growth. Manufacturers appear to be bracing for a more challenging environment, emphasising resilience and efficiency over expansion.



REVENUE OUTLOOK (2H2025 VS 1H2025) FRAGMENTED

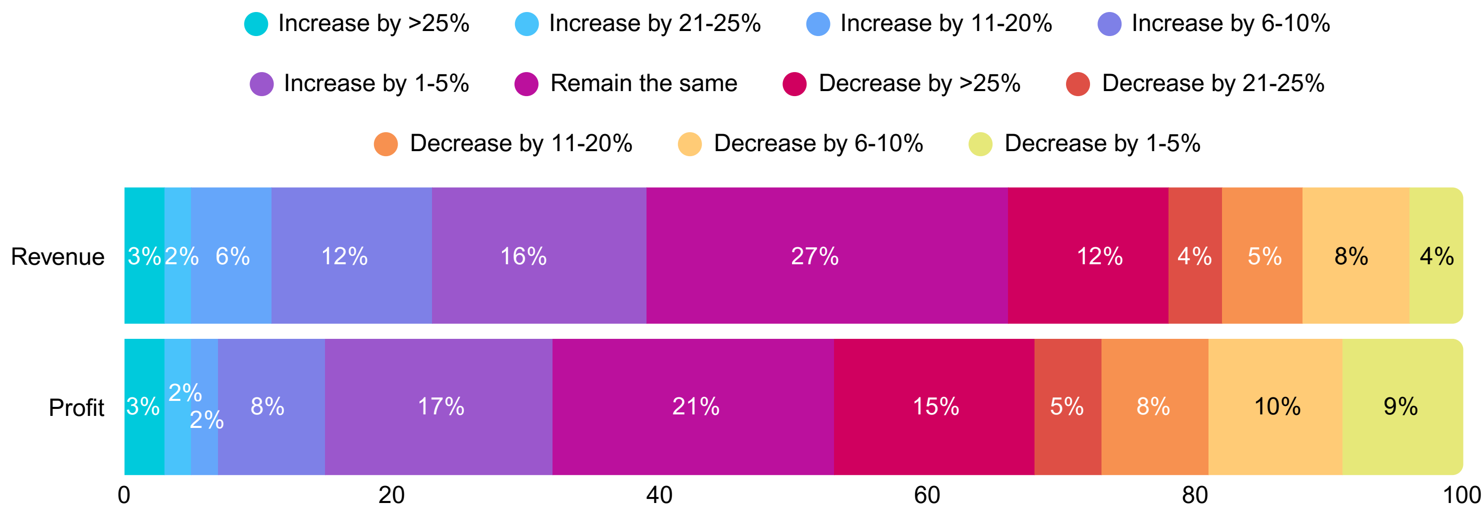
Survey results reveal a fragmented revenue outlook for 2H2025, with gains, declines and stability nearly evenly balanced. About 39% of manufacturers expect higher revenues versus 1H2025, though most of these increases are modest, underscoring limited confidence in broad-based recovery. At the same time, 34% of respondents anticipate contractions, including a sizeable share bracing for steep declines. A further 27% expect revenues to remain unchanged, signalling resilience in navigating headwinds, but also a cautious stance centred on consolidation rather than renewed expansion. This distribution reflects a sector divided between modest growth and contraction, with strong momentum largely absent.

Among firms expecting growth, most respondents expect only incremental improvements. Roughly 16% project increases of 1-5%, while 12% forecast growth of 6-10%. Only 3% foresee strong double-digit expansion above 25%, highlighting that optimism remains highly contained.

On the downside, revenue pressures are significant. While 8% of respondents anticipate moderate declines of 6-10%, another 12% expect sharp contractions of more than 25%. The severity of these projected declines underscores the fragility of many firms and their ongoing exposure to persistent operating challenges.

Overall, the outlook points to a fragile revenue landscape for 2H2025. Gains are limited and offset by equally large declines, with stability accounting for just over a quarter of responses. With strong growth rare and downside risks still evident, the sector remains focused on efficiency and resilience, prioritising risk management over expansion.

Expectations on Revenue and Profit Growth for 2H2025



PROFIT OUTLOOK (2H2025 VS 1H2025) TILTS NEGATIVE

Survey results on manufacturers' profit expectations reveal a vulnerable and uneven outlook for 2H2025. Gains, stability and losses are all represented, but the balance tilts toward contraction, with modest improvements for some firms outweighed by sharper declines for many others.

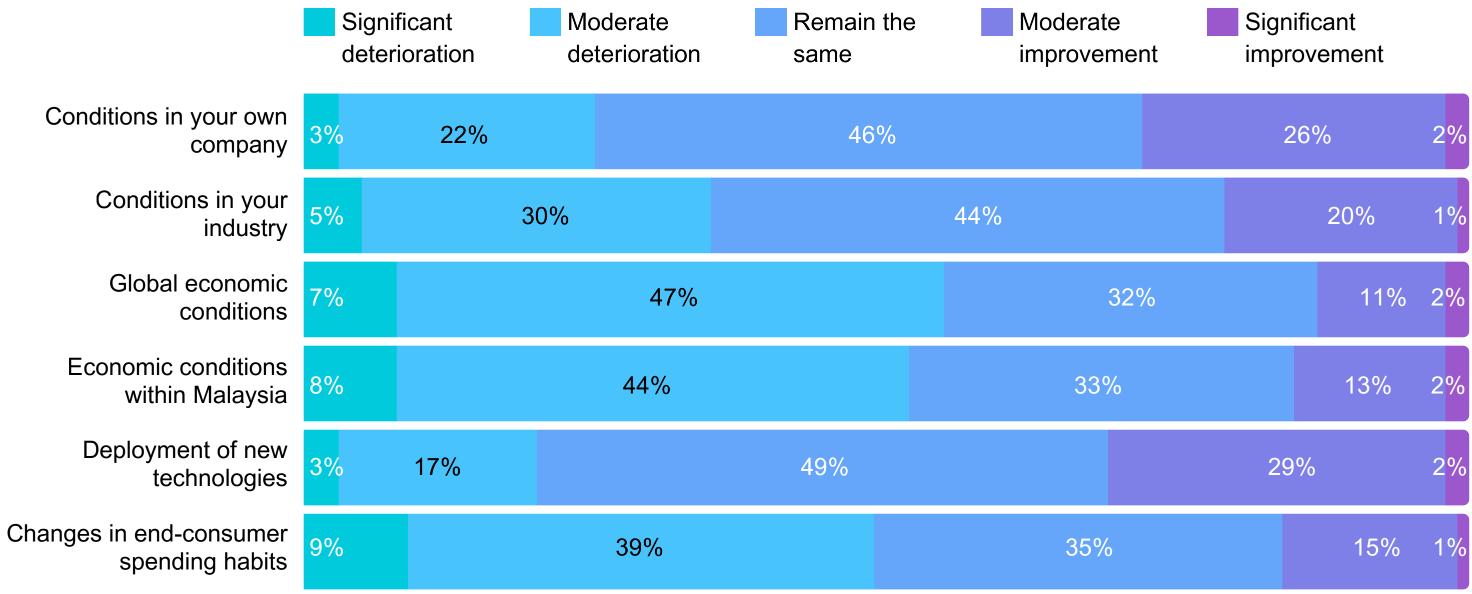
Roughly 32% of firms expect profits to increase, though most anticipate only modest gains. About 17% project marginal improvements of 1-5%, while 8% foresee slightly stronger growth of 6-10%. Only a small minority (3%) expect significant double-digit expansion above 25%, underscoring that strong profit momentum remains rare.

The largest single group (21% of respondents) expect profits to remain unchanged, suggesting consolidation is a common theme as firms seek stability amid cost and demand pressures. Meanwhile, a considerable 47% of manufacturers forecast lower profit. Within this group, about 15% expect steep contractions exceeding 25%, while another 18% anticipate moderate decreases of 6-20%. This skew towards declines signals ongoing profitability challenges for a substantial share of the sector

BUSINESS CONFIDENCE LEVEL: STABILITY AMID ECONOMIC UNCERTAINTY

Findings on business confidence reveal a cautious outlook: while many firms express confidence in stable operations and see some optimism in technology deployment, confidence is far weaker regarding both the global and domestic economy. Concerns about consumer demand also weigh heavily, with a notable share of respondents anticipating further deterioration in spending habits.

Business Confidence Level

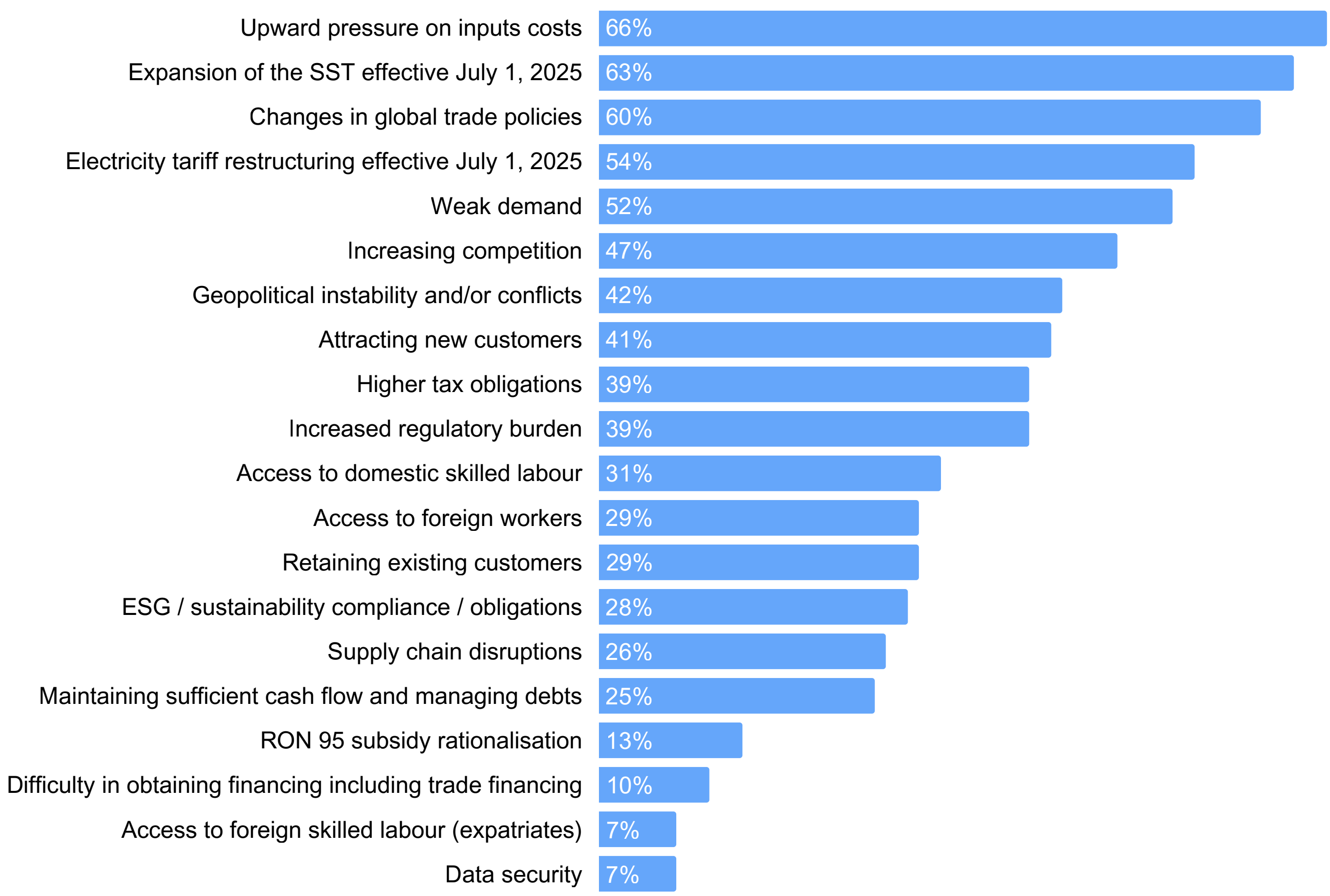


Most respondents (46%) indicated confidence that their own company's conditions would remain stable or improve moderately (26%), while only a small 2% predicted significant gains. Confidence in industry conditions was weaker, with 30% anticipating moderate deterioration. Views on the broader economy were more negative: nearly half of respondents expected moderate deterioration in both the global (47%) and Malaysian (44%) economies, while fewer than 15% anticipated improvement.

By contrast, confidence in the deployment of new technologies was more balanced and relatively positive. Almost half of respondents believed conditions would remain unchanged, and 29% foresaw moderate improvement, reflecting cautious optimism about technological adoption. However, confidence in consumer spending habits was more negative, with 39% predicting moderate deterioration and only 15% expecting improvement, underscoring concerns over future demand.

KEY BUSINESS CHALLENGES AHEAD

Challenges to Business Operations and Growth



When asked about the biggest challenges to their businesses, respondents pointed to a combination of cost pressures, tax changes and demand-related concerns as the most significant issues. While operational and financial risks such as competition, regulatory burden and labour access were also noted, the overall responses suggest that firms are most worried about rising costs and policy-driven changes in the near term.

The most pressing concerns were upward pressure on input costs (66% of respondents), the expansion of the Sales and Service Tax (SST) (63%), and changes in global trade policies (60%). These were followed by electricity tariff restructuring (54%), weak demand (52%) and increasing competition (47%). A notable share of respondents also highlighted challenges such as geopolitical instability and/or conflicts (42%), attracting new customers (41%), higher tax obligations (39%), and an increased regulatory burden (39%). Labour-related issues were reported by 31% for access to domestic skilled labour and 29% for foreign workers, while 29% also raised concerns over retaining existing customers.

Less frequently mentioned challenges included ESG sustainability compliance/obligations (28%), supply chain disruptions (26%), cash flow pressures (25%), RON95 subsidy rationalisation (13%) and difficulty accessing financing (10%). The least pressing concerns were data security (7%) and access to expatriate talent (7%), suggesting these are lower on the immediate risk horizon compared to cost, tax and demand pressures.

OPPORTUNITIES IN A SHIFTING LANDSCAPE

Manufacturers most frequently identified expanding product portfolios as their biggest opportunity, cited by 56% of respondents. This clear lead shows that diversification is viewed as the most immediate lever for growth, either by broadening offerings for domestic demand or tailoring products for overseas buyers. Similarly, exporting to new countries (38%) and new international business opportunities (29%) ranked high, underscoring the drive to tap external markets as a buffer against softer local demand. By contrast, some opportunities appear more conditional. 28% of respondents tied growth to a rebound if costs ease, reflecting the drag from persistent inflation and interest rates.

Longer-term opportunities centred on transformation. Digitalisation, cloud computing and AI (23%), along with ESG initiatives such as value-chain projects (16%) and net-zero strategies (14%) highlight areas that may reshape competitiveness over time, though less urgent in the near term.

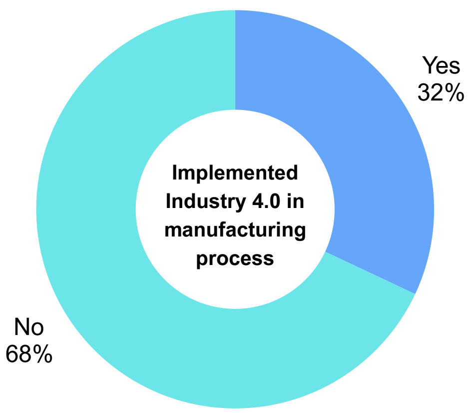
A smaller group pointed to consolidation strategies, including vertical or horizontal integration (13%) and specialisation (11%), while reshoring (7%) was least cited. Notably, 14% saw no opportunities, signalling caution among a minority.

Overall, the findings reveal a two-speed outlook: short-term focus on product and market diversification, and longer-term bets on technology and sustainability. Cost relief remains the crucial swing factor. Until margins stabilise, growth ambitions will be tempered by caution.

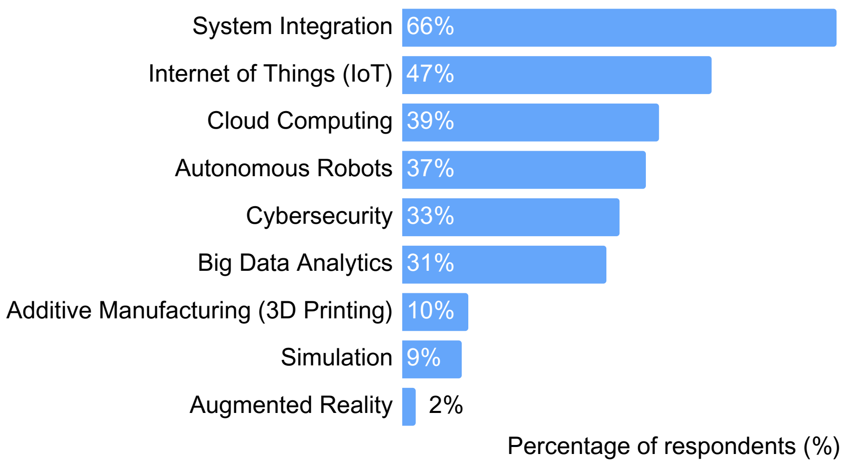
Manufacturers today are navigating a period of intense disruption, where technology adoption, global trade pressures, and domestic tax reforms converge to reshape operations and competitiveness. While progress has been made in embracing elements of Industry 4.0, most firms remain at an early stage, focusing on selective rather than widespread digital transformation. At the same time, external shocks such as US tariffs are adding costs and market uncertainty, pushing companies to diversify exports and rethink supply chains. Domestically, the expansion of the Sales and Services Tax (SST) has emerged as a major source of compliance complexity and rising operational costs, particularly for smaller firms. Together, these forces underscore a sector under pressure but also adapting with resilience and strategic adjustments.

Industry 4.0 Adoption: Slow but Targeted

The survey reveals that adoption of Industry 4.0 technologies among manufacturers remains relatively limited. Only 32% of companies reported having implemented Industry 4.0 solutions, while the majority (68%) have not yet embraced them. Among the adopters, the most widely used technology is System Integration (66%), followed by the Internet of Things (47%) and Cloud Computing (39%). Other notable areas include Autonomous Robots (37%), Cybersecurity (33%) and Big Data Analytics (31%), indicating selective uptake focused on core efficiency and connectivity tools. In contrast, advanced solutions like Additive Manufacturing (10%) and Augmented Reality (2%) remain niche. This suggests that while progress is being made, most respondents are still at an early stage of digital transformation.

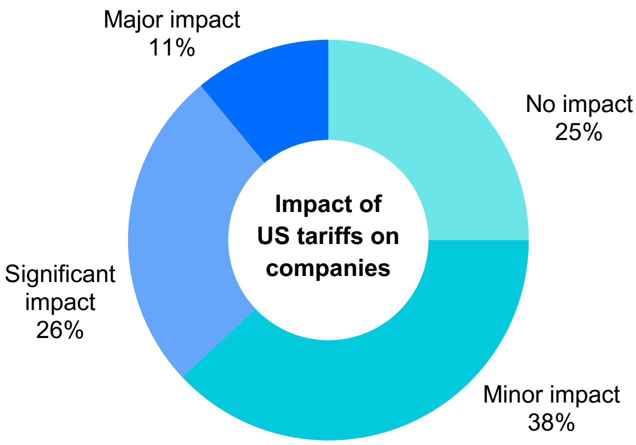


Industry 4.0 technology / pillar implemented in manufacturing process

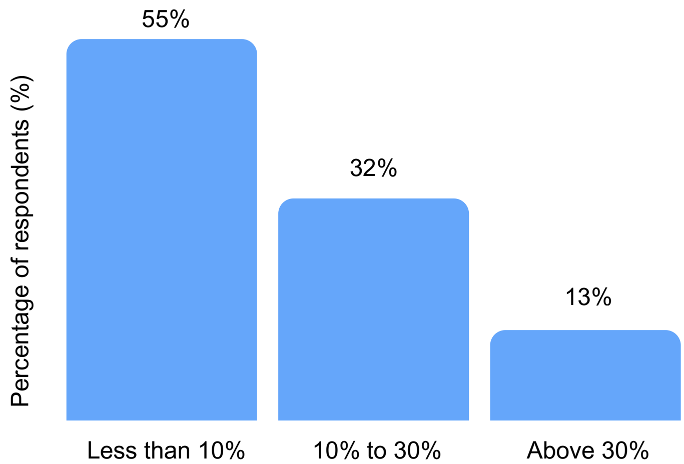


US Tariffs Bite: Manufacturers Diversify and Adapt to Survive

US tariffs are exerting a tangible influence on manufacturers, though the severity of impact varies. Around 25% of companies reported no effect, while the largest group (38%) experienced only minor adjustments. However, more than one-third faced serious challenges: 26% reported significant disruption and 11% said the tariffs posed major, long-term risks. Among those affected, 55% reported losses below 10%, but 32% endured 10-30% losses, and 13% suffered hits above 30%, pointing to serious financial vulnerabilities for a meaningful segment.



Average percentage drop in export sales to US market

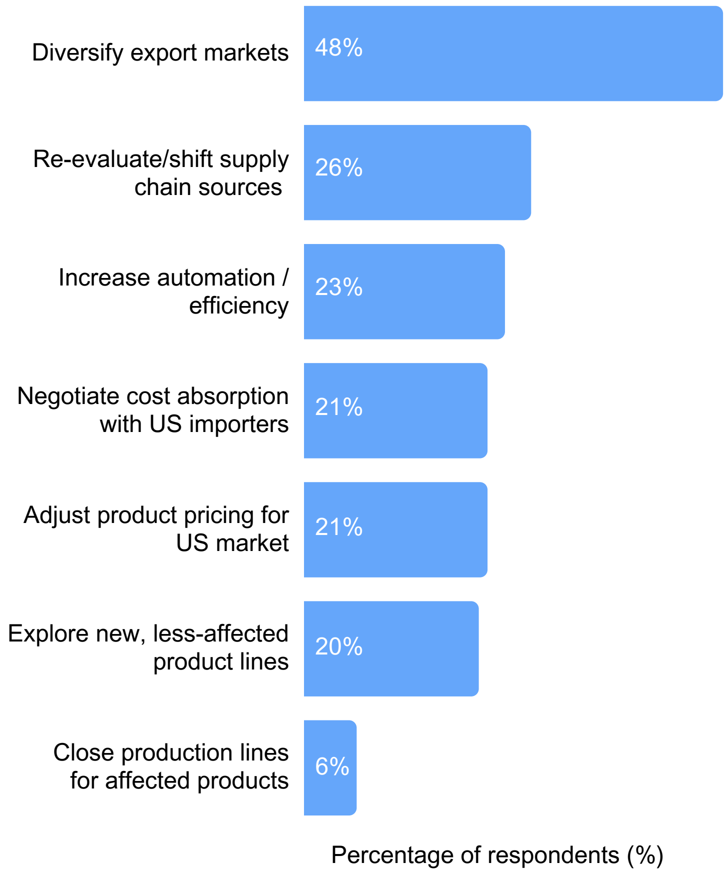


In response, manufacturers are pursuing proactive strategies. Nearly half (48%) are diversifying export markets, while others are re-evaluating supply chains (26%), increasing automation and efficiency (23%), renegotiating costs with US importers (21%) or adjusting product pricing (21%). These measures show resilience and a strong pivot toward adaptation in the face of external pressures.

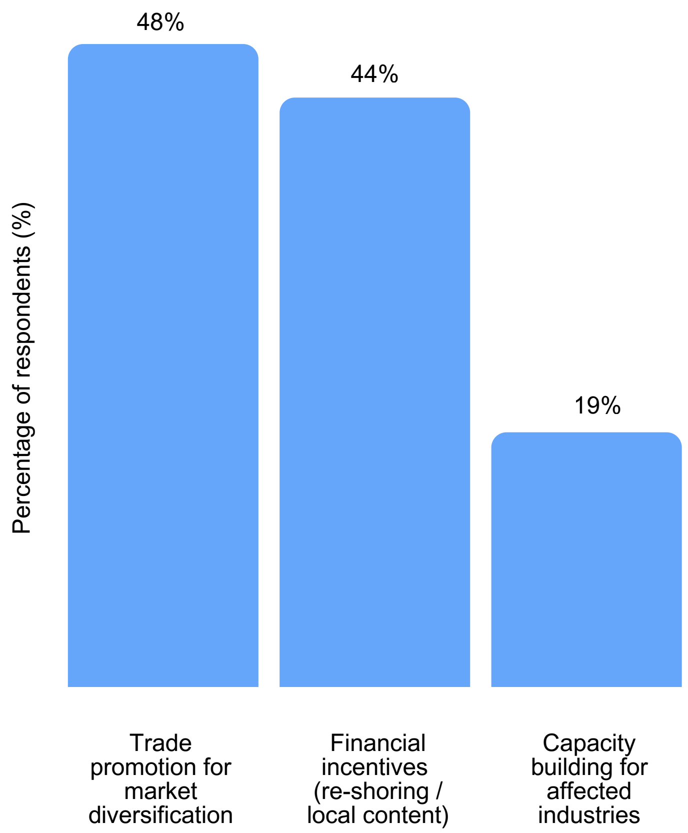
When asked about government support, respondents' top priorities were clear. Almost half of them (48%) favoured trade promotion for market diversification, underlining the need for expanded access to global markets. Nearly as many (44%) sought financial incentives to implement re-shoring and local content measures, while 19% called for capacity-building initiatives to help industries adapt and modernise.

Other suggestions, though voiced by only small numbers, included corporate tax reductions, digital transformation grants, better tax incentives and even calls for zero tariffs on US goods. These highlight a broader spectrum of expectations but reinforce the central message: respondents see market access and financial support as critical levers for resilience and competitiveness in today's challenging environment.

Key strategies to mitigate adverse effects of US tariffs



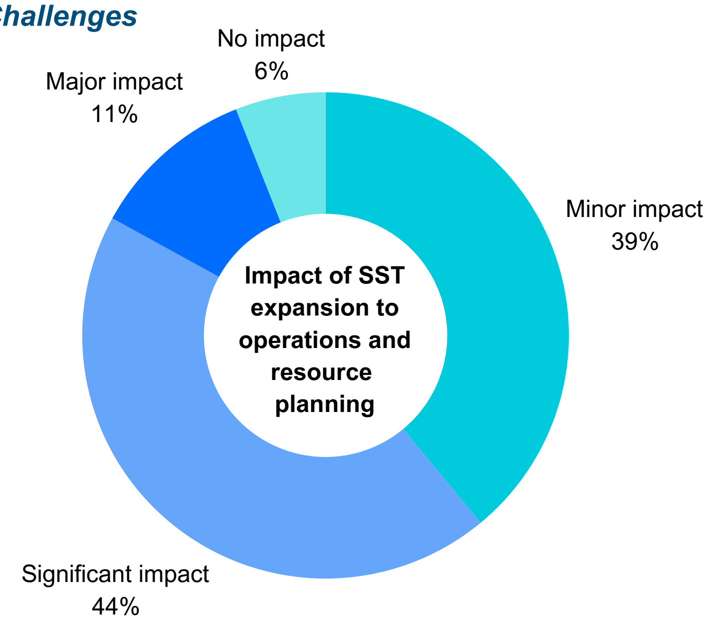
Government support / policy interventions to address US tariff challenges



SST Expansion Drives Higher Costs and Compliance Challenges

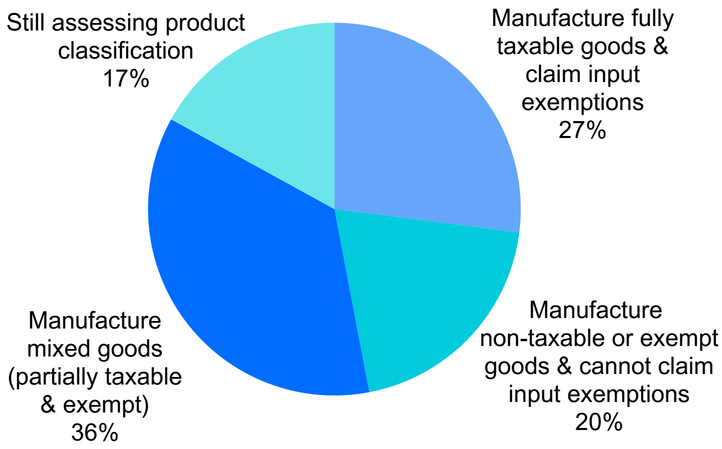
The expansion of the Sales and Services Tax (SST) scope has also had a pronounced effect on manufacturers. Only 6% of companies said they experienced no impact, while 39% described the effects as minor, involving manageable compliance or cost adjustments. However, the largest share of respondents (44%) indicated significant impacts, including added compliance burdens and operational complexities. A further 11% reported major disruptions, such as the need to alter business models or scale down operations.

This distribution underscores that while a portion of manufacturers can manage the new requirements without major strain, nearly half face substantial challenges that could hinder efficiency and competitiveness. The SST scope expansion is not a marginal issue; it is reshaping operations for the majority of respondents.

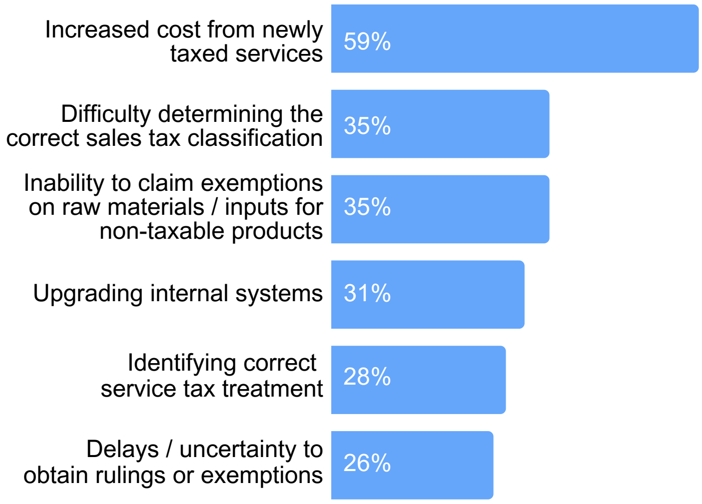


Beyond the direct cost and compliance burden, companies face varying degrees of exposure to the SST depending on how their products are treated under the tax. Around 27% indicated that their products fall fully within the taxable scope, meaning sales tax is chargeable on all their outputs. In contrast, 20% reported producing exempt or non-taxable goods. Although these companies are not directly exposed through output tax, they cannot claim input exemptions, which results in higher input costs. A significant share (36%) operates across both taxable and exempt goods, which increases complexity in tracking and applying the correct treatment. Notably, 17% remain uncertain or are still assessing their product classification, underscoring that a considerable portion of the industry has yet to fully determine its obligations. Taken together, these findings show that most companies are grappling not just with higher costs but with classification challenges and compliance uncertainty that risk undermining competitiveness.

Company's current SST position under the expanded scope



Main areas of impact from the SST scope expansion

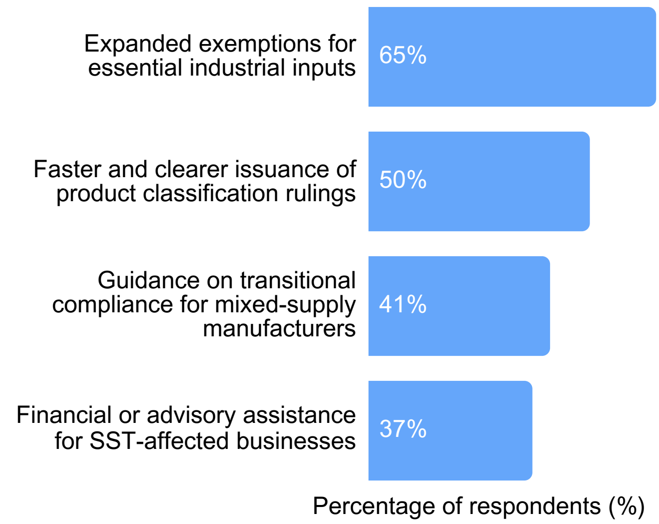


Respondents highlighted multiple pain points stemming from the expansion of the Sales and Services Tax (SST). The most frequently cited issue was the increased cost from newly taxed services (59%), particularly the inclusion of construction services at 6% and rental or leasing services at 8% from July 1, 2025, which has raised operating expenses. Close behind, 35% reported difficulties in obtaining or applying exemptions on raw materials and inputs, while another 35% struggled with determining the correct classification and tax codes for products. Beyond these cost pressures, companies also flagged broader compliance challenges. Other significant concerns include the need to upgrade internal systems (31%), uncertainty or delays in obtaining Customs rulings (26%), and challenges in identifying the correct service tax treatment for complex transactions (28%).

Although smaller in proportion, some respondents also flagged issues such as increased costs of imports, difficulties with exemptions, added workload for staff and disruptions to scrap sales. Together, these responses reinforce that the SST's broader scope is not only raising direct costs but also adding layers of compliance and operational strain, particularly for SMEs with limited resources.

The reintroduction of GST was the most notable measure suggested by respondents, reflecting industry preference for a more transparent system that avoids cascading costs and allows input tax credits. Beyond this, respondents also called for stronger government intervention to address the challenges arising from the SST expansion, with clear demands for exemptions, clarity and support. The most widely requested measure was expanded exemptions for essential industrial inputs (65%), showing that companies see cost relief on key materials as critical. About 50% also asked for clearer guidance on product classification, as many still face difficulties in identifying the correct HS codes under the expanded scope. In addition, 41% sought better support on transitional compliance for mixed-supply manufacturers and 37% requested financial or advisory assistance to cope with the expanded tax framework.

Government measures required to support manufacturers under the expanded SST scope

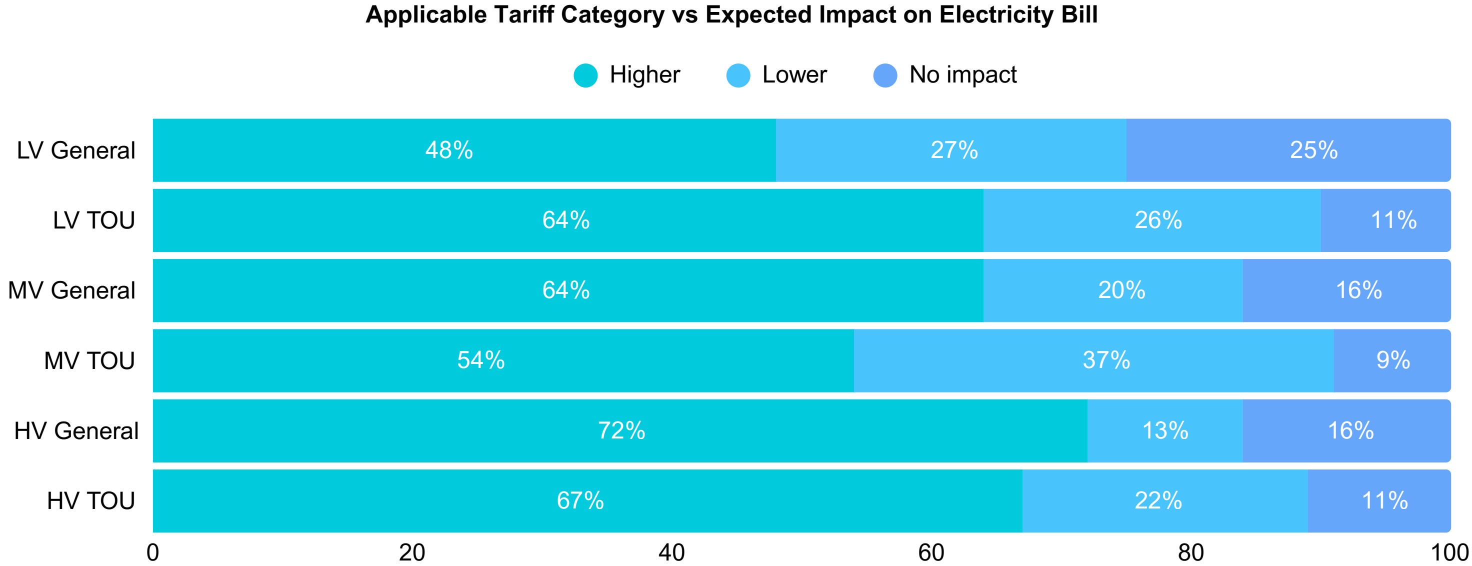


Respondents further suggested more active government briefings, clearer guidelines and exemptions for export-oriented or specialised industries. Taken together, these results show that manufacturers are not only burdened by higher costs and compliance complexity but are also seeking greater clarity, predictability and targeted relief measures from policymakers.

IMPACT OF TARIFF REVISIONS ON BUSINESS COSTS

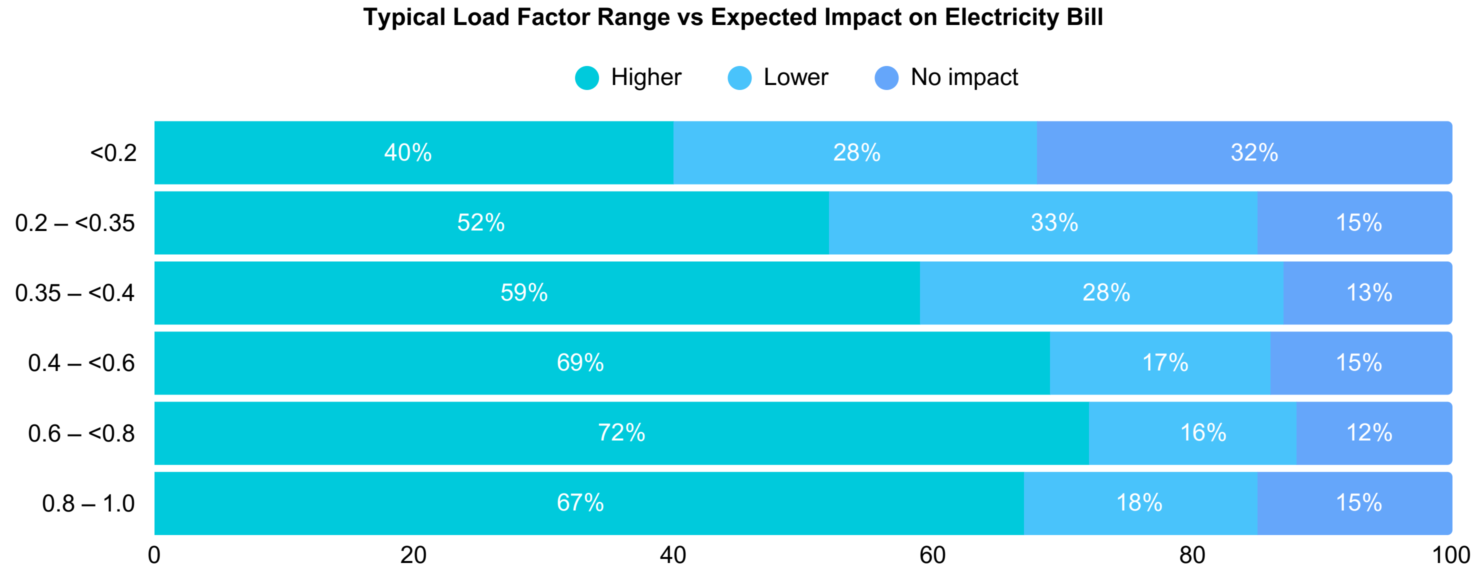
Impact by Category *(analysis of LV, MV, HV, General vs. TOU)*

Survey results shows that the majority of businesses across all groups reported higher costs following tariff adjustments. Overall, 60.3% of respondents experienced an increase, 22.6% reported lower costs, and 17.8% indicated no change. High voltage users were the most heavily affected, with 71.7% of HV General and 66.7% of HV TOU respondents citing higher costs. Medium voltage users also reported significant effects, with 64.0% of MV General and 53.8% of MV TOU respondents facing cost increases. At the low voltage level, 63.6% of LV TOU and 48.2% of LV General respondents experienced higher costs, though LV General users reported relatively more stability, with 25.3% indicating no change. The results suggest that tariff revisions have had a broad and upward impact on business expenses, particularly for high-consumption categories. The reported higher bill in July 2025 however, could also be attributed to higher electricity usage for the month for some respondents.



Impact by Load Factor *(analysis by typical load factor ranges)*

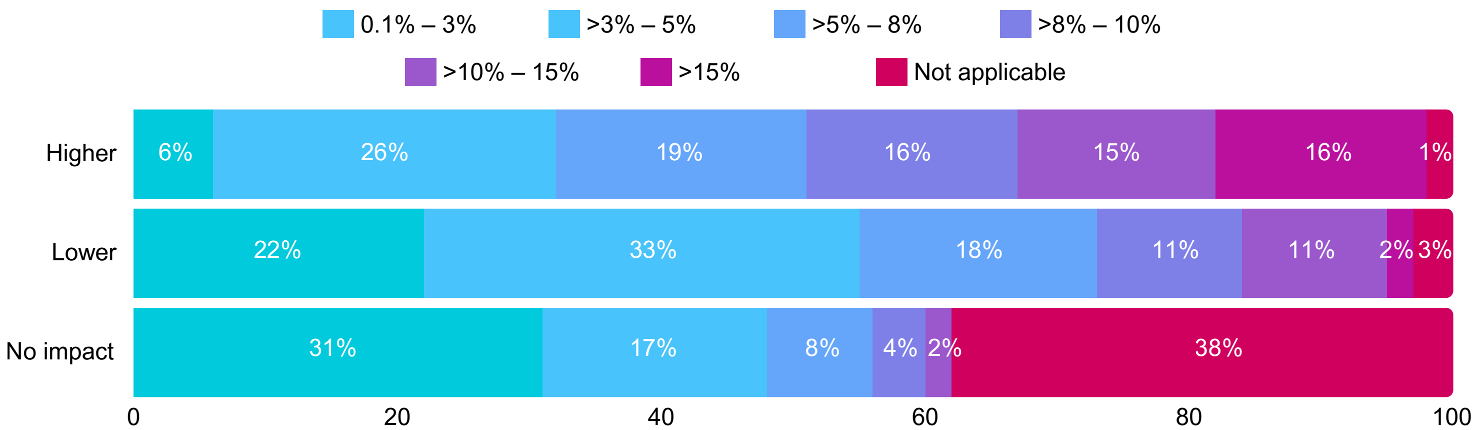
When analysed by typical load factor ranges, the survey results again highlight that higher costs dominate across most categories, with 60.6% of respondents overall reporting increases. Businesses with more consistent or efficient load factors, particularly those in the 0.4-0.8 and 0.8-1.0 ranges, were most affected, with more than half reporting higher costs. For example, 72.4% of firms with load factors between 0.6-0.8 reported cost increases. In contrast, those with very low load factors (<0.2) displayed a more mixed experience, with 40.0% reporting higher costs, 27.7% noting lower costs, and 32.3% indicating no change. This pattern suggests that businesses with higher and steadier energy utilisation were disproportionately impacted by the tariff changes, while low-utilisation firms experienced more varied outcomes. The observed impacts may not be attributed exclusively to the tariff changes; they could also reflect the higher electricity consumption levels of firms with steadier utilisation.



Impact by Estimated % Change *(analysis of the magnitude of reported increases / decreases)*

A cross-tabulation of perceived impact with estimated percentage change further illustrates the scale of the adjustments. Among businesses reporting higher costs, the majority estimated increases in the range of >3-15%, with 25.7% citing >3-5%, 16.4% citing >8-10%, and 15.3% citing >10-15%. Smaller shares reported increases below 3% (6.1%) or above 15% (16.4%). For those who experienced lower costs, most reported reductions in the 0.1-5% range, with 33.1% estimating >3-5% and 21.8% reporting 0.1-3%. Respondents who reported no change aligned with the "not applicable" category, reflecting consistency in their responses. Taken together, the findings show that the dominant experience was moderate cost increases of 3-15%, confirming a widespread but not extreme upward pressure on operating costs.

Expected Impact on Electricity Bill vs Estimated % Change



Energy Efficiency on the Rise, with Strong Intent for Further Adoption

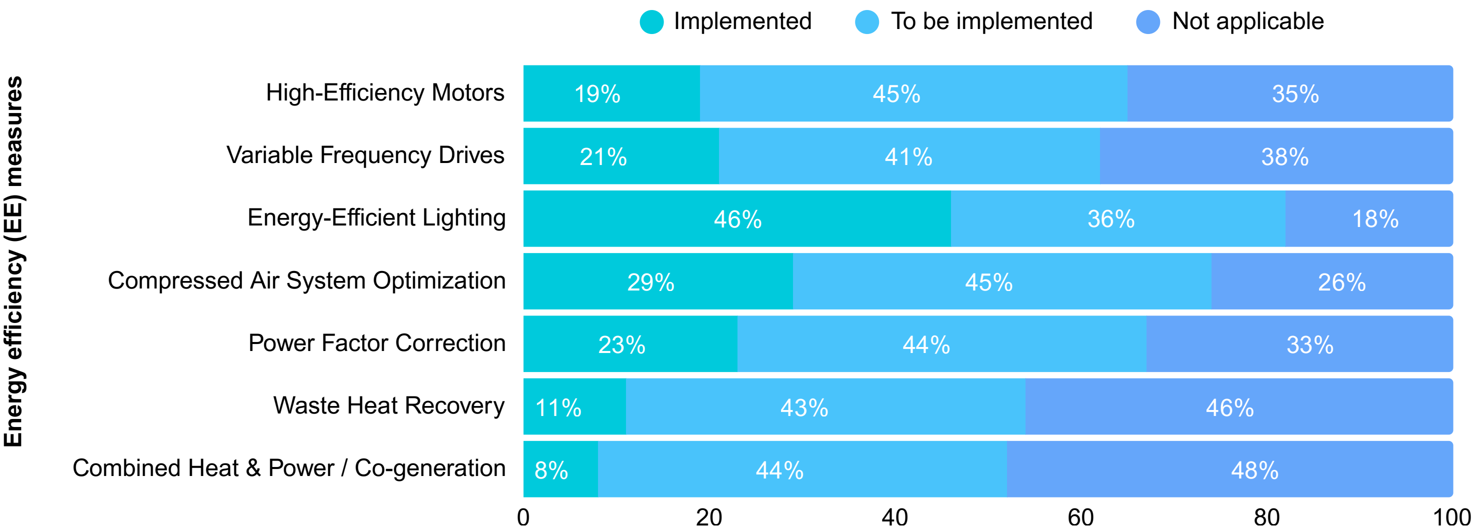
The survey shows that respondents are actively implementing energy efficiency (EE) measures, though uptake varies by technology. The most widely adopted initiative is energy-efficient lighting (46%), reflecting its cost-effectiveness and ease of deployment. This is followed by compressed air system optimisation (29%) and power factor correction (23%), indicating broader efforts to improve equipment efficiency.

Looking at planned actions, the highest share of respondents intending to adopt high-efficiency motors (45%), compressed air optimisation (45%), power factor correction (44%), and combined heat and power/co-generation (44%), signalling a strong pipeline of investments. Less common but still notable planned measures include waste heat recovery (43%) and variable frequency drives (41%), suggesting that more advanced solutions are under consideration even if not yet widespread.

By contrast, a significant share of firms reported measures as not applicable to them, particularly for waste heat recovery (46%) and co-generation (48%), likely due to sectoral differences in energy use.

Overall, the findings highlight a clear shift toward greater energy efficiency in 1H2025, with widespread implementation of low-cost, high-impact measures and growing intent to adopt more advanced technologies over time.

On other energy efficiency measures implemented and to be implemented, the survey results show that there is uniformly low uptake. Implemented measures included building envelope improvements and awareness programmes on electricity consumption, while future measures mentioned were energy monitoring systems and plant maintenance for efficiency.

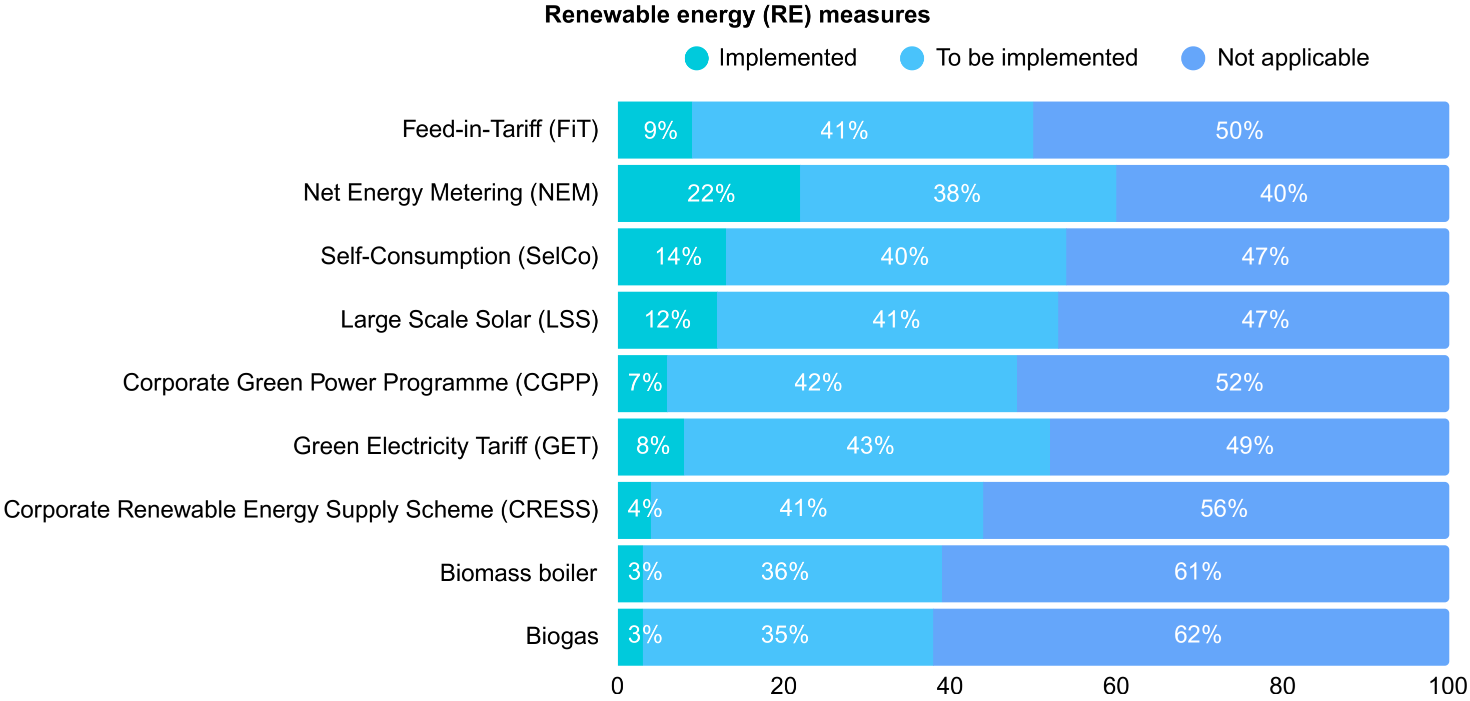


Renewable Energy Measures: Adoption Still Limited, but Growing Intent

The survey results show that renewable energy (RE) adoption among respondents is still modest, but there is growing intent to expand in the future. The most widely implemented measures are Net Energy Metering (22%), Self-Consumption (14%), and Large-Scale Solar (12%), indicating that solar-based solutions dominate current RE uptake. Other initiatives such as the Feed-in-Tariff (9%), Green Electricity Tariff (8%) and Corporate Green Power Programme (7%) are less common, while advanced schemes like the Corporate Renewable Energy Supply Scheme (4%) (which replaces the Corporate Green Power Programme), biomass (3%) and biogas (3%) remain niche.

Looking ahead, intent to adopt is considerably higher. For instance, 38% for Net Energy Metering, 40% for Self-Consumption, and 41% for Large-Scale Solar. Similarly, newer schemes such as the Green Electricity Tariff (43%)and CRESS (41%) show strong potential uptake. While current use of biomass and biogas is minimal, intent remains low here too, suggesting that respondents are prioritising solar and grid-based renewable solutions over bioenergy.

Overall, these findings highlight that while RE adoption today is relatively limited, there is significant momentum building toward solar and grid-linked renewable schemes, making renewable energy a growing focus for manufacturers going forward.



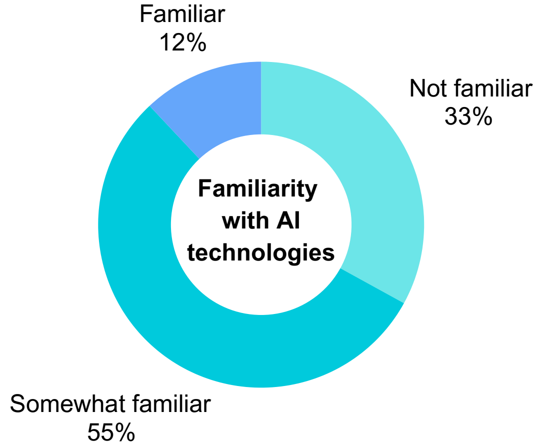
ARTIFICIAL INTELLIGENCE (AI)

Artificial Intelligence: Low Adoption but Emerging Applications

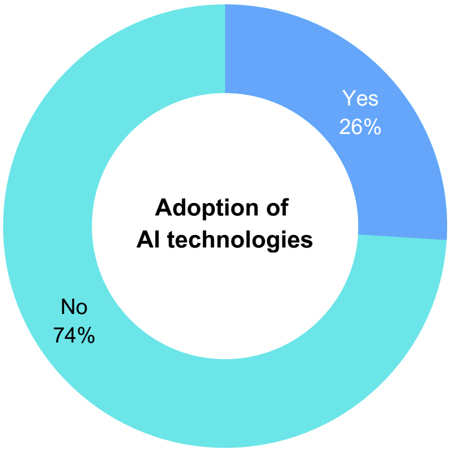
Survey results show that respondents' familiarity with artificial intelligence (AI) remains modest. Just 12% of them said they are familiar with AI technologies, while a majority are somewhat familiar (55%) and 33% not familiar. This indicates that while awareness is growing, a large proportion of firms still lack a deep understanding of AI.

When it comes to adoption, only 26% of companies have implemented AI solutions, while nearly three-quarters (74%) have yet to take the step. Among adopters, AI is being applied in diverse areas, with the top use cases including customer service/chatbots (40%), inventory management (35%), product development (36%)and production optimisation (33%). Other notable applications are quality control (25%), supply chain forecasting (22%) and predictive maintenance (15%).

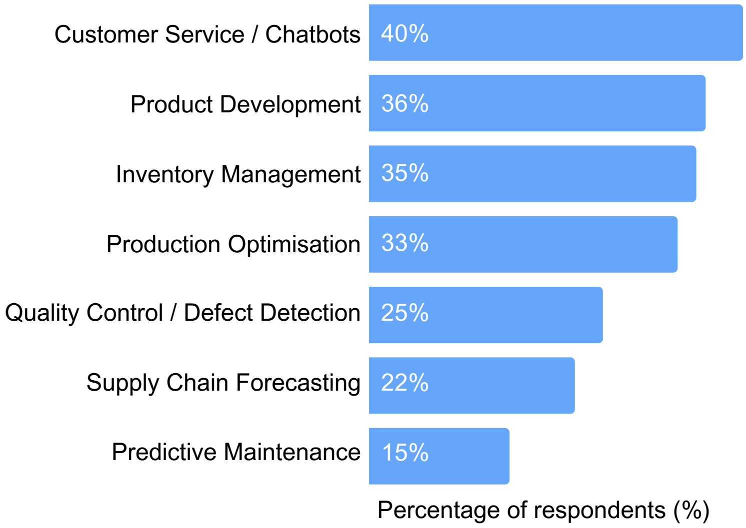
In addition, a range of niche uses were highlighted, such as marketing, administrative automation, OCR for invoices, ERP integration, cybersecurity and HSE data analysis, suggesting that experimentation is taking place across operational and support functions.



Overall, the results reveal that AI adoption in manufacturing is still in its early stages, with most firms at the awareness or exploratory phase. However, the breadth of applications already in use points to the growing potential of AI as a transformative tool for efficiency, innovation and customer engagement



Operation areas currently using AI technologies



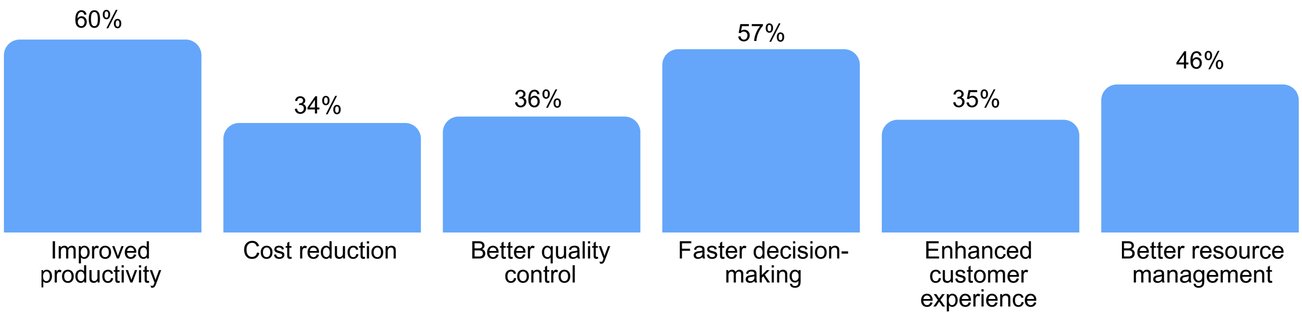
AI Benefits: Productivity and Decision-Making Lead the Gains

Respondents already using artificial intelligence (AI) are seeing clear benefits across a range of operational areas. The most frequently cited gain was improved productivity (60%), followed closely by faster decision-making (57%). Other key benefits include better resource management (46%), quality control improvements (36%), enhanced customer experience (35%) and cost reduction (34%). These results highlight AI's role not only in efficiency and productivity but also in improving quality and customer-facing outcomes.

A smaller number of respondents also highlighted niche benefits such as root cause analysis in quality control, increased employee engagement, fewer human errors and time savings in product presentation preparation. While less common, these examples show the breadth of ways AI is being applied in manufacturing contexts.

Overall, the findings reinforce that AI adoption, while still limited, is delivering tangible returns for early adopters, especially in productivity, decision-making and resource optimisation, areas critical for competitiveness in 1H2025 and beyond.

Benefits experienced from AI adoption



The FMM Business Conditions Index (FMM BCI) tracks the general state of the economy affecting business viability. The FMM BCI uses the current level of business activity as a proxy for current business conditions, compared to six months ago. Index values range from 0 to 200 points. A value above the growth-neutral threshold level of 100 points indicates an improvement or positive outlook, while that below the threshold indicates a worsening or negative outlook.

The FMM Business Conditions Survey 1H2025 was conducted from July 2, 2025 to August 15, 2025 and received 627 responses, of which 71.0% were SMEs (based on full-time employees), with 150, 107 & 72 responses from Klang Valley, Perak & Penang respectively. The top three industries for responses were: Food, Beverage & Tobacco (17.7% of respondents); Chemicals & Chemical Products (11.8%); and Plastic & Plastic Products (10.5%).

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