Engineering Services Outsourcing (ESO) : Prospects and Potentials in the Philippines

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Nomura Research Institute Consulting & Solutions
ESO Industry Trends
ESO in Philippines
Identification of gaps and challenges
Policy Imperatives for Philippines
Building the Philippines ESO Brand
Engineering Services Outsourcing (ESO) refers to outsourcing of work related to Design & Development and makes up ~ 55% of the Global IT-BPM market.

**ESO**

**Definition**

Engineering consulting activity that uses various hardware, embedded, software and IT services solutions for the designing and development of products.

**ESO Services**

- Drafting & 3D Modelling
- Control System Engineering
- Manufacturing Engineering
- Engineering Analysis
- Product Design & Testing
- Design Automation
- Embedded Systems
- Plant design/Process Engineering

**Traditional Industries**

- Automotive
- Telecom
- Healthcare
- Aerospace
- Consumer Electronics
Global trends in ESO

Shift in outsourcing spend from sub-critical to critical functions and emergence of IOT and AI will be the major trends in the ESO industry

Key Trends in ESO Industry

Growing complexity of product designing, prototyping, visual designing and engineering and product lifecycle management

Growing trend of engaging clients with consulting services

Emergence of Engineering analytics, IoT and artificial intelligence

Increase of 2.5x in global engineering and R&D outsourcing (2012-2020)

Moving from sub-critical to crucial functions

With increasing outsourcing requirements capacity constraint in traditional hubs in sectors other than Telecom / Hi-tech in India & China, there is an opportunity for other emerging markets to come in

Source: Secondary Research, NRI Analysis
ESO Industry Trends

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IT-BPM Industry in Philippines

Philippines dominates the global voice IT-BPM industry; ESO industry is still in the nascent stages of development

Philippines IT-BPM Voice Industry

Philippines Global Market Share

- Philippines: 17.0%
- ROW: 83.0%

Philippines contact centre delivery market size (USD Bn)

- 2012: 8
- 2014: 11
- 2016: 13

Philippines ESO Industry

- ESO revenue in 2016:
  - ~250 Mn
  - (1% of IT-BPM Industry)

No. of ESO Companies in Philippines

- 2006: 24
- 2014: 42

Major sectors covered in Philippines are Construction, Hi-tech/Telecom, Automotive & Marine

Source: Secondary Research, Govt. of Philippines
Current Stage of ESO Industry in Philippines

Philippines is at the entry level stage in ESO skills complexity with focus being on the product design part of the ESO value chain

ESO Skills Complexity Levels

Philippines is at the entry stage of the ESO GVC at the lower end of the complexity spectrum and moving towards the upper end of complexity

Source: Secondary Research, Govt. of Philippines
Philippines ESO journey is expected to follow the same path as the ESO evolution in India

India – ESO Journey

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>• Do it Cheaper</td>
<td>• Do it Cheaper (but Better)</td>
<td>• Business Solutions</td>
<td>• Business Impact</td>
</tr>
<tr>
<td>• Texas Instruments Blore 1985</td>
<td>• Quality Consistency</td>
<td>• Redesign Processes</td>
<td>• Business improvement</td>
</tr>
<tr>
<td>• Lower Cost, Arbitrage</td>
<td>• Adoption of Global Practices / Process / Quality Control</td>
<td>• Build domain expertise</td>
<td>• Performance based pricing &amp; SLAs</td>
</tr>
<tr>
<td>• Staff Augmentation</td>
<td>• Cost + Reliable + Quality</td>
<td>• Enhance domain competency</td>
<td>• Accountability for outcomes</td>
</tr>
<tr>
<td>• Y2K (Indian IT Cos)</td>
<td>• Scale Up</td>
<td></td>
<td>• Risk sharing biz models</td>
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</table>

Philippines - ESO Journey

<table>
<thead>
<tr>
<th>~till 2002</th>
<th><del>2003</del>2009</th>
<th>2010 onwards</th>
<th>~Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Arbitrage</td>
<td>Capacity Augmentation</td>
<td>Domain Expertise</td>
<td>Co-Innovation/Development</td>
</tr>
<tr>
<td>Cost saving from low complexity engg. services</td>
<td>Reduced Time to Market (Speed &amp; Scale as required)</td>
<td>Access to Emerging Markets Address skill gaps, using domain expertise etc.</td>
<td>Joint development activities, sharing of risk/reward, share investments etc.</td>
</tr>
</tbody>
</table>
ESO Industry Trends

ESO in Philippines

Identification of gaps and challenges

Policy Imperatives for Philippines

Building the Philippines ESO Brand
Factors of outsourcing

Besides lower costs & high quality demands, factors like infrastructure, business environment and other institutional factors are crucial for ESOs.

Key factors for choosing an ESO destination (Business Perspective)

**Cost Reduction**
- Compensation Costs
- Rental Costs
- Telecom & Utilities Costs

**Quality**
- Hard Skills – Quality of Math & Science Education
- Soft Skills – English Proficiency
- Degree of customer orientation

**Infrastructure**
- Overall Infrastructure Quality of Electric Supply
- Mobile-cellular telephone subscriptions
- Fixed Telephone line subscriptions
- Internet Bandwidth

**Talent Pool & Future Readiness**
- Availability of scientists & engineers
- Tertiary education enrolment rate
- Quality of research institutions
- Availability of specialised training courses

**Business Environment**
- Intellectual Property Rights
- Ease of doing business
- Tax Rates

Source: NRI Analysis
Identification of Gaps & Challenges

Philippines is benchmarked against emerging countries on the factors of outsourcing to identify the gaps and challenges.

Key factors for choosing an ESO destination (Business Perspective)

Factors for choosing an ESO destination for a company

1. Attractiveness index
   - Cost Reduction
   - Quality

2. Ease of Scaling up (capability reach index)
   - Business Environment
   - Talent Pool & Future Readiness
   - Infrastructure

Competitor Countries for ESO

- Brazil (BR)
- China (CHN)
- Czech Republic (CR)
- India (IND)
- Indonesia (IDN)
- Malaysia (MY)
- Philippines (PH)
- Thailand (TH)
- Vietnam (VNM)

Source: NRI Analysis
Compensation and rental costs are lower in Philippines; quality of science education needs to be improved

With the high demand in BPO/KPO sectors driving the growth of ‘Next wave cities’, rental costs could go up

Telecom and utilities costs are higher in Philippines as compared to western and other South Asian countries

The Govt. should take steps to provide telecom and utility provisions to ESO businesses at discounted rates

~95% of population is proficient in English

Philippines is considered as hub between Asian & Western markets and there is a higher degree of closeness to clients’ countries
Ease of doing business is low in Philippines; quality of electricity and telecom availability poses a hurdle for ESO industry

- Other South East Asian countries performed much better than Philippines in the Ease of doing Business rankings in 2017
- Getting electricity supply and time to start a new business remain the concern

- Though internet bandwidth in Philippines is relatively better, it is still far behind other emerging economies.

- Inadequate supply of infrastructure is the 2nd most problematic factor for doing business in Philippines.
Ease of Scaling up (capability reach index)

Tertiary education enrolment rate is high, employment readiness and engineering & research streams lack focus

Talent Pool and Future Readiness Benchmarking

- **Availability of scientists & engineers**
  - Low: BR, VNM, PH, CZ, TH, IDN, IND, CHN, MY
  - High: VNM, PH, BR, TH, IDN, CHN, IND, CZ, MY

- **Tertiary education enrolment rate**
  - Low: IDN, MY, IND, VNM, PH, CHN, TH, BR, CZ
  - High: VNM, PH, BR, TH, IDN, CHN, IND, CZ, MY

- **Quality of research institutions**
  - Low: VNM, PH, BR, TH, IDN, CHN, IND, CZ, MY
  - High: VNM, PH, BR, TH, IDN, IND, PH, CZ, MY

- **Availability of specialised training courses**
  - Low: BR, VNM, TH, CHN, IND, IND, PH, CZ, MY
  - High: BR, VNM, TH, CHN, IND, IND, PH, CZ, MY

- Even though the tertiary education enrolment rate is high, the employee hiring funnel should be assessed to test the employment readiness of university students.

- The university-industry collaboration in R&D index has seen a declining trend in the past few years.

- The quality of research institutions is low even though there is high availability of training courses, which might lead to lower quality of the talent pool.
While Philippines is attractive for setting up ESO businesses due to low costs and high quality, infrastructure & talent pool need to be improved.

Summary

➢ Attractiveness of Philippines for ESO companies should be retained in terms of costs and quality.

➢ At the same time, infrastructure and quality of research and education should be improved to help Philippines move up in the ease of capability reach index for ESO companies.
ESO Industry Trends

ESO in Philippines

Identification of gaps and challenges

Policy Imperatives for Philippines

Building the Philippines ESO Brand
Stakeholders

Participation of different stakeholders will enable the creation of a vibrant ESO ecosystem in Philippines

Stakeholders in ESO ecosystem

**Government Of Philippines**
- Department of Education
- Department of Finance
- Department of Foreign Affairs
- Department of Information & communication Technology
- Department of Science & Technology
- Department of Trade & Industry

**Outsourcing Companies**
- Independent engineering design companies
- Subsidiaries of local companies
- Captives of global companies
- IT players diversifying into another line of business
- Industry Associations

**Academic & Research Institutes**
- Engineering Universities
- Higher Education/Management Institutes
- R&D Institutes
- Technical Training Institutes

Source: NRI Analysis
Stakeholders

Active partnerships between the stakeholders on the back of Govt. incentives and mandates is necessary to fuel growth in ESO industry

Source: NRI analysis

Government of Philippines

Government incentives/mandates to foster domestic ESO industry

3 Way Collaboration to build the Philippines ESO brand

Industry – academia partnerships

Academic & Research Institutions

Domestic Outsourcing Companies

Govt. sponsorships for training & research
Imperatives for Stakeholders

Imperatives for stakeholders have been derived based on the Philippines ESO Scenario, identification of gaps & challenges and stakeholders involved.
**Imperatives for Government**

Stable policy environment, infrastructure development and targeted efforts at the ESO industry & academia are necessary to tap into the ESO opportunity.

<table>
<thead>
<tr>
<th>Key Action Areas</th>
<th>Partners / Collaborators</th>
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<tbody>
<tr>
<td><strong>Department of Education</strong></td>
<td></td>
</tr>
<tr>
<td>• Upgrade curriculum taking into account emerging technologies</td>
<td>✓ Academia</td>
</tr>
<tr>
<td><strong>Department of Finance</strong></td>
<td>✓ Industry (Domestic &amp; MNCs)</td>
</tr>
<tr>
<td>• Increase government spending on engineering services</td>
<td>✓</td>
</tr>
<tr>
<td>• Reduce income tax to ensure that high-skilled people will not leave the country</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Department of Information &amp; Communication Technology</strong></td>
<td></td>
</tr>
<tr>
<td>• Provide high speed internet connectivity at reduced prices</td>
<td>✓ Academia</td>
</tr>
<tr>
<td><strong>Department of Science &amp; Technology</strong></td>
<td>✓ Industry (Domestic &amp; MNCs)</td>
</tr>
<tr>
<td>• Encourage local R&amp;D through incentives/mandates</td>
<td>✓</td>
</tr>
<tr>
<td>• Create an innovation centre with industry &amp; academia</td>
<td>✓</td>
</tr>
<tr>
<td>• Policies to encourage innovation &amp; adaptability</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Department of Trade &amp; Industry</strong></td>
<td></td>
</tr>
<tr>
<td>• Provide easy financing options for entrepreneurs and domestic companies</td>
<td>✓ Academia</td>
</tr>
<tr>
<td>• Focus efforts to attract anchor companies</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Infrastructure development, investment in R&D & skill upgrading, export promotions, incentives and establishment of Special Economic Zones (SEZs) will bolster the ESO industry**

Source: NRI Analysis, Surveys
Imperatives for Industry & Academia

Industry – Academia partnerships should be established under the mandate of the Govt. to push ESO industry growth

Outsourcing Companies

1. Provide short term trainings/internships for university students
2. Collaborate with universities and research institutes for R&D
3. Adopt an institute or university for ongoing work support and research

Academic & Research Institutes

1. Upgrade curriculum to include technical trainings and internships
2. Include R&D projects as a component in curriculum
3. Hold events/competitions in collaboration with companies for ongoing live projects

Implications of Imperatives

Higher quality of talent pool

Infrastructure Development

ROBUST ESO ECOSYSTEM

Source: NRI Analysis

Attractiveness

Ease of Capability Reach

Philippines

Philippines

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Building the Philippines ESO brand - Roadmap

Dual strategy of focussing on the lower end of the value chain in short term and moving up the value chain in the long term should be adopted

ESO Industry Development Roadmap

Building the Philippines ESO Brand
- Strengthening the current low-end services in ESO value chain
- Fostering the development of high-end services in ESO value chain

With increasing outsourcing requirements capacity constraint in traditional hubs in sectors other than Telecom / Hi-tech in India & China, there is an opportunity for Philippines to take up some tasks especially in the simpler parts of the value chain

Source: NRI Analysis
Starting with immediate training of the existing talent pool, a long term strategy to develop the talent pipeline is put in place

**Short – Term**
(Focus on improving existing talent pool)

- **Skillset Benchmarking**
  - Focus more on Engineering skills
  - Benchmark against ESO industry expectations
  - Benchmark against global competitors

- **Establish Training Centres**
  - Collaborate with Global MNCs and captives for designing training programs
  - Upskill ESO employees in lower end of value chain

- **Upgrade Curriculum**
  - Include lower end skill sets as mandatory subjects at university & technical institutes
  - Include emerging technologies and sectors in the curriculum at university level

**Mid - Long - Term**
(Focus on development of talent supply pipeline)

- **Improve the quality of education in the country**
  - Focus more on technical & engineering skills
  - Improve quality of Math & Science education

- **Develop innovation centres**
  - Innovation centres with partnerships between industry & academia to be developed
  - Incentivise R&D at local ESO companies

- **Institute partnerships for R&D and recruitment**
  - R&D and recruitment partnerships between global captives and local schools/universities should be incentivised

Source: NRI Analysis
Building the Philippines ESO brand – Infrastructure & Business Environment Development

**Short-term focus should be on developing the infrastructure for existing MNCs to set up captive ESOs, new hubs and policies can be assessed in the long term**

<table>
<thead>
<tr>
<th><strong>Short – Term</strong></th>
<th><strong>Mid - Long - Term</strong></th>
</tr>
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<tbody>
<tr>
<td>(Focus on initiation of the ESO industry)</td>
<td>(Focus on growth &amp; expansion of the ESO industry)</td>
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</table>

**Infrastructure & policy benchmarking**
- Focus on power & telecom sectors
- Benchmark against ESO expectations
- Benchmark against competitor countries

**Assess the tax system and policies in place**
- Improve ease of doing business in Philippines
- Set up a periodic review committee for stable policy environment for ESOs

**Establish ESO SEZs within existing technology parks**
- Electricity & high speed internet at discounted rates
- Tax rebates and incentives for export services

**Attract IT companies & entrepreneurs**
- IT companies to follow from the presence of captive ESOs of global MNCs
- Provide attractive funding options to entrepreneurs

**Attract existing MNCs to set up captive ESOs**
- Undertake focussed campaigns for MNCs to showcase Philippines ESO capabilities
- Incentives for setting up R&D centres

**Develop infrastructure for new ESO hubs**
- Identify low-cost locations and establish ESO centres
- Incentivise purchase of such office locations

Source: NRI Analysis
Building the Philippines ESO brand - Roadmap

An international summit with all the stakeholders present and unveiling of the roadmap for Philippines ESO would trigger the growth of ESO industry

International Summit for Philippines ESO Brand

Objective

➢ To showcase the existing IT-BPM services in Philippines and unveil the roadmap for ESO industry development
➢ Introduce various reforms and incentives for ESO industry
➢ Market and promote the ESO industry in Philippines

<table>
<thead>
<tr>
<th>Industry</th>
<th>Global MNCs, Domestic ESO companies, IT Companies,</th>
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<tbody>
<tr>
<td>Academia</td>
<td>Global R&amp;D institutes, Science &amp; Engineering universities</td>
</tr>
<tr>
<td>Investors</td>
<td>Global &amp; Local Financing Companies, Venture Capitalists</td>
</tr>
<tr>
<td>Government Bodies</td>
<td>Important Trade Partners for ESO &amp; Govt. of Philippines</td>
</tr>
</tbody>
</table>

MOUs to be signed for development and promotion of ESO industry

Roadmap of ESO Industry FY 2019 - 2025

Short-term focus should be on developing the infrastructure for existing MNCs to set up captive ESOs, new hubs and policies can be assessed in the long term

- **Short-term**
  - Focus on existing technology parks
  - Establish ESO SEZs within existing technology parks
  - Attract IT companies & entrepreneurs

- **Long-term**
  - Assess the tax system and policies in place
  - Develop infrastructure for new ESO hubs

Source: NRI Analysis
ESO can help The Philippines achieve many end objectives

1. Help follow an innovation led growth model in the long run e.g. Japan & Germany. Create a USP in the ASEAN region

2. Help solve the problem of under-employment

3. Help retain the human (brain) capital within the Philippines

4. Help get higher insulation from issues like recent trade wars

5. Would further spur manufacturing

Not just manufactured but also Engineered in The Philippines
We look forward to working closely with you and supporting you in these VUCA times

From Negative (-)  To Positive (+)

V Volatility  V Vision
U Uncertainty  U Understanding
C Complexity  C Clarity
A Ambiguity  A Action

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