



Study on

Producing Skilled Workforce for Potential Economic Sectors

in Sindh

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| Geographical Area/ Cluster Location | Sector/Subsector |
|--|--|
| Karachi | Textile Sector/Readymade Garments (knitted, woven) |
| Karachi | Textile Sector/Home Textiles |
| Karachi, Hyderabad | Manufacturing/Car Assembly, Auto Parts |
| Karachi | Manufacturing/Printing Industry |
| Karachi | Manufacturing/Leather and Leather Goods, Apparel |
| Karachi | Services/Logistics, Customer Service |
| Karachi, Hyderabad | Services/Hotel and Hospitality Industry |
| Karachi, Hyderabad | Services/Banking |

Guidelines to identify Potential Economic Sectors

- Priority in the governments' socio-economic development plans (federal/provincial)
- High employability potentials: preferable local demand; overseas employment may be included if concrete demands shown
- Balance of industrial and artisan trades
- Availability of information and materials to identify possible skills gaps
- Trades and professions covered by accessible CBT&A curricula and packages
- Possibility to identify capable business organisations (chambers, associations, etc.)
- Possibility to identify relevant and potential training institutions

Priority Recommendations

Sectors with high employment potentials, supportive business membership organisations, adequate training facilities and availability of CBTA/ CVT training courses:

| | |
|---------------|--|
| Manufacturing | <ol style="list-style-type: none"> 1. Auto Parts, Car Manufacturing 2. Home Textiles, Readymade Garments 3. Leather Garments and Apparel 4. Printing and Packaging |
| Services | <ol style="list-style-type: none"> 1. Logistics, Customer Service 2. Hospitality and Hotel 3. Banking and Finance |

List of sector charts 1.1 – 18¹

Chart 1.1 Textile/Readymade garments (woven, knitted)

| Geographical Area Cluster Location | Sector/Subsector | Rational | Trades/Profession | Business Membership Organisation | Training Establishment |
|---------------------------------------|--|--|--|--|---|
| Karachi | Manufacturing: Textile: Readymade garments (woven) | Largest subsector of textile industry; 38% of total workforce; 60% share in export; Labour intensive production; Constant workforce requirements at NVQF 1, 2, 3; Garments sector has comparatively stable exports as compared to the other exports sectors. | <ul style="list-style-type: none"> - Industrial stitching - Machine operator - Stitching machine mechanic - Apparel supervisor - Pattern drafting & cutting - CAD/CAM pattern design - Quality control & QA - Planning & production control - Knitting machine operator - Machine/ hand embroidery - Computerised industrial embroidery - Professional garment washing | Pakistan Readymade Garments Manufacturers & Exporters Association (PRGMEA), Karachi Pakistan Hosiery Manufactures & Exporters Association (PHMA), Karachi | <ul style="list-style-type: none"> - Pakistan Readymade Garments Technical Training Institute, (PRGTTI), Karachi (officially linked to PRGMEA) - STEVTA - iACT - AMANTECH - Hunar Foundation - Memon Industrial and Technical Institute |
| | Textile: Readymade garments (knitted) | | | | |
| CBTA qualifications available | Textile Trades: Maintenance Technology: | NVQF 2: Dress Making; Knitting Machine Operator; Pattern Drafting & Grading; NVQF 3: Textile/Fashion Designing; NVQF 2: Heat, Ventilation & Air-conditioning (HVAC); Industrial Electricity; Home Appliance Technician; NVQF 3: Mechatronics Technician; NVQF 1-3; Building Electricity; NVQF 5: Energy Efficiency Advisor | | | |

¹ Please Note: The Trades/Profession listed are reported needs by the industries and include functions as well as jobs to be performed and are not necessary established trades or professions.

Chart 1.2 Textile/Towels, Linen, Home Textiles

| Geographical Area Cluster Location | Sector/Subsector | Rational | Trades/Profession | Business Membership Organisation | Training Establishment |
|------------------------------------|---|---|---|---|--|
| Karachi | <p>Manufacturing:</p> <p>Textile; Terry towels, Linen, Home textiles</p> <p>The industry produces all kinds of home textiles like terra towels, bathrobes, towels, bedlinen, sower wraps, curtains, made-ups, etc.</p> | <p>Large subsector of textile industry;</p> <p>High level products and quality consciousness;</p> <p>Industrialised production methods include labour intensive sections;</p> <p>Increasing requirements of NVQF 2-5 level workforce;</p> <p>Lack of electrical and mechanical maintenance personnel, PLC/CNC technicians.</p> | <ul style="list-style-type: none"> - Weaving operator - Stitching machine operator - Quality checkers - Pattern making & cutting - Packaging - Machine embroidery - Pre-treatment - Dyeing & printing - Yarn dyeing - Post-treatment - Textile machinery technicians - General maintenance - Mechanical and electrical - Plant maintenance (power, water treatment, boiler operation, conveyor systems, etc.) | <p>Towel Manufacturers' Association (TMA) Karachi</p> | <ul style="list-style-type: none"> - SMA Rizwi Textile Institute (SMART), Karachi. - STEVTA - Memon Industrial and Technical Institute - AMANTECH - Hunar Foundation - Karigar Institute |
| CBTA packages available | <p>Textile Trades:</p> <p>Maintenance Technology:</p> | <p>NVQF 2: Dress Making; Knitting Machine Operator; Pattern Drafting & Grading;</p> <p>NVQF 3: Textile/Fashion Designing;</p> <p>NVQF 2: Heat, Ventilation & Air-conditioning (HVAC); Industrial Electricity; Electrical Equipment Installation & Repair;</p> <p>NVQF 3: Mechatronics Technician; NVQF 1-3; Building Electricity</p> <p>NVQF 5: Energy Efficiency Advisor</p> | | | |

Chart 1.3 Manufacturing, Light Engineering / Auto Assembly, Auto Parts Supply

| Geographical Area Cluster Location | Sector/Subsector | Rational | Trades/Profession | Business Membership Organisation | Training Establishment |
|---------------------------------------|--|--|---|--|---|
| Karachi | Light engineering: | Market size has increased | Whole range of metal working and electrical trade, which includes: | Pakistan Association of Automotive Parts & Accessories Manufacturers (PAAPAM), | - Pakistan Skill Development Institute is run by PAPAAM and offers skill enhancement trainings. |
| Hyderabad | (Automotive) | tremendously requiring increase production volume; | <ul style="list-style-type: none"> • Tools dies and moulds 12.8% • Sheet metal 20.5% • Metal casting 11.8% • Metal forging 14.7% • Rubber/plastic parts 17.6% • Electronics/electrical parts 13.1% • Assembly 13.2% • Store keeping 17.1% | Karachi | - AMANTECH - Hunar Foundation - Saint Patrick's - Karigar Training Institute - STEVTA - Memon Industrial and Technical Institute |
| | Auto parts | Rapid change in technology requires better qualified workforce; | Present CVT courses can continue as well. | | |
| | Cars and Light Commercial Vehicles (LCVs) | Conventional systems are changing to computer aided systems; | | | |
| | Parts for two wheelers three wheelers | Traditional on-the-job training is insufficient; | | | |
| | Tractor parts | Technology up-gradation requires adequate employees of NVQF Level 1 – 6. | | | |
| | Parts for trucks and buses | | | | |
| | Parts for after sales market | | | | |
| CBTA packages Available | NVQF 2: Welding; Heat, Ventilation & Air-conditioning; Automobile Mechanics, Auto Electrician; Machinist; Electro Mechanical Technology, Electrical Equipment , Installation & Repair, Welding and Fabricator; NVQF 3: Auto CAD; Automotive Technician; Mechanical Manufacturing; Mechatronic Technician, Electronics Technician; CAD/CAM Operator NVQF 5: Energy Efficiency Advisor | | | | |

Chart 1.4 Manufacturing/Printing

| Geographical Area Cluster Location | Sector/Subsector | Rational | Trade(s)/Profession(s) | Business Membership Organisation(s) | Training Establishment |
|---------------------------------------|---|--|---|--|---|
| Karachi | Manufacturing: | Second largest sub sector with current market worth of USD 5 billion. | - Printing press operators | Pakistan Association of Printing and Graphic Art Industry (PAPGAI) | <ul style="list-style-type: none"> - PAPGAI on their own initiative have started a 6-months machine operator training based on CVT model with AMANTECH - STEVTA - Government College of Technology (Printing); Diploma of Associate Engineer in (Printing & Graphic Arts); |
| Hyderabad | Printing & Graphic Arts. | Economic growth require additional workforce of NVQF level 2 – 5. | - Electronics technicians | | |
| | These include conventional offset, flexible printing (gravure and flex), label printing, screen printing, binding houses and carton making units. | Modern printing technology calls for Higher qualification. | - PLC technicians | | |
| | | | - Mechanical and electrical machine and plant maintenance technicians | | |
| | | | - Graphic designers | | |
| | | | - Materials handling | | |
| CBT&A Packages Available | Printing Trade: | NVQF 2: Computer Operator; NVQF 3: Computer Graphics-Motion; Computer Graphics-Print; Web Design & Development; | | | |
| | Production and Maintenance Technology: Repair; Electro mechanical Technology; | NVQF 2: Heat, Ventilation & Air-conditioning (HVAC); Industrial Electricity; Electrical Equipment Installation & Repair; NVQF 3: Mechatronics Technician; NVQF 1-3; Building Electricity; Electronics Technician | | | |
| | | NVQF 5: Energy Efficiency Advisor | | | |

Chart 1.5 Manufacturing/Leather and Leather Goods

| Geographical Area Cluster Location | Sector/Subsector | Rational | Trade(s)/Profession(s) | Business Membership Organisation(s) | Training Establishment |
|---------------------------------------|--|---|--|--|---|
| Karachi | Manufacturing: Leather & Leather Goods | The leather industry exports contribute USD 1.3 billion in the GDP and plans to increase to USD 3.7 billion through 3300 SMEs in the next five years. . . The leather garment manufacturers aim to augment production to its full capacity of exceeding 7.5 million pieces annually. Likewise, the footwear industry to 200 million pairs annually against its current annual production of just 100 million pairs. | <ul style="list-style-type: none"> - Leather processing - Cutting techniques - Pattern making techniques - Grading - Product design & development - Lining & interlining - Stitching - Machine operation - Machine maintenance - Finishing | <p>Pakistan Leather Garments Manufacturers & Exporter Association (PLGMEA) Karachi</p> <p>Pakistan Tanners Association (PTA), < 200 members Karachi</p> | <ul style="list-style-type: none"> - National Institute of Leather Technology (NILT), Karachi - (officially linked to PTA / PLEGMEA) - STEVTA - HUNAR Foundation - AMANTECH - Memon Institute |
| CBTA Packages available | Leather trades: Maintenance Technology: | NVQF 2: Shoe Laster; | | | NVQF 2: Heat, Ventilation & Air-conditioning (HVAC); Industrial Electricity; Electrical Equipment Installation & Repair; Electro Mechanical Technology. NVQF 3: Mechatronics Technician; NVQF 1-3; Building Electricity, NVQF 5: Energy Efficiency Advisor |

Chart 1.6 Services/Logistics, Customer Services

| Geographical Area Cluster Location | Sector/Subsector | Rational | Trades/Professions | Business Membership Organisation(s) | Training establishments |
|--|--|--|---|--|--|
| Karachi | Services: | | | | |
| | Customer Service | The three sub-sectors (jointly referred as logistics) contributed 13.7% in the GDP of Pakistan. | Trades/skills required by the sector include: <ul style="list-style-type: none"> - Loaders - Drivers - Green logistics management - Custom house brokerage - Dangerous goods packing and handling - Safety and security management - Sales agents - Warranty handling & management (repair/replacement shipment handling) - Freight forwarding | Pakistan International Freight Forwarders Association (PIFFA), Karachi | <ul style="list-style-type: none"> - PIFFA Training Institute Karachi and Lahore (Institutes being managed by the association itself. Providing diploma level training in logistics and supply chain management) - iACT - STEVTA. |
| | Logistics (Transportation, Communication and Storage) | Provides a large number of direct and indirect employments. Sectors require a relatively higher educated workforce (NVQF level 4 - 5) at professional and middle management position. | | | |
| <p>CBTA Qualifications available</p> <p>NVQF 2: Computer Operator; Office Assistant, Customer Service & Sales Assistant; NVQF 3: Call Centre Agent; Logistics & Supply Chain Assistant; NVQF 4: E-commerce</p> | | | | | |

Chart 1.7 Services/Hospitality Industry; Tourism

| Geographical Area Cluster Location | Sector/Subsector | Rational | Trade(s)/Profession(s) | Business Membership Organisation (s) | Training Establishment |
|------------------------------------|-------------------------|--|---|---|---|
| Karachi | Services: | Pakistan's hospitality industry is booming due to growing economic activities particularly the CPEC project. | <ul style="list-style-type: none"> - Hotel operations - Hospitality and tourism management - Professional cookery - Food & beverage production and service - Front office / guest services - Customer services - Sales - Housekeeping | Pakistan Hotel Association (PHA), Karachi Pakistan Tourism Development Corporation | <ul style="list-style-type: none"> - Pakistan Institute of Tourism and Hotel Management, Karachi - TAF Foundation, Karachi - College of Tourism & Hotel Management (COTHM) Karachi - iACT - STEVTA - Memon Industrial and Technical Institute |
| | Hotel Industry | The rate of hotel occupancy has surged to 80% across the country compared to 35% in previous years. The sector has greater possibilities of female employment. | | | |
| CBTA Packages available | Hotel Industry: | NVQF 2: Cook; Waiter; Office Assistant; NVQF 3: Chef de Partie; Food & Beverage Captain; Call Centre Agent ; Web Design & Development ; NVQF 4: Sous Chef; E-Commerce | | | |
| | Maintenance Technology: | NVQF 2: Heat, Ventilation & Air-conditioning (HVAC); Industrial Electricity; Electrical Equipment Installation & Repair; Electro Mechanical Technology; Electronic Home Appliance Technician. NVQF 3: Mechatronics Technician; NVQF 1-3; Building Electricity, 1-3 Plumbing-cum-Solar Water Heating Technology NVQF 5: Energy Efficiency Advisor | | | |

Chart 1.8 Services/Banking and Financial Institutions

| Geographical Area Cluster Location | Sector/Subsector | Rational | Trade(s)/Profession(s) | Business Membership Organisation (s) | Training Establishment |
|------------------------------------|---|---|--|--|---|
| Karachi Hyderabad | Services: Banking and Financial institutions including asset management and insurance companies). | With 65 banks, 55 asset management companies and 25 insurance corporations, the financial sector is a largest services sector in Pakistan with overall 3.5% growth rate. Requires skilled human resources on a regular basis due to vast branch network of banks and other financial institutions. The sector has greater possibilities of female employment. | <ul style="list-style-type: none"> - Customer services - Branch banking operations - Marketing - Sales and after sales services - Office management, IT and administration - Secretarial skills - Branch fraud risk management - Account opening specialist - KYC/AML specialist - Credit risk analysis - Trade processing specialist – Export & import | Pakistan Banks' Association (PBA) Mutual Funds Association of Pakistan Insurance Association of Pakistan | <ul style="list-style-type: none"> - Institute of Bankers Pakistan (IBP), Karachi (only recognized Institute dedicated to providing technical training services for the banking industry in the country.) - iACT - STEVTA - Pakistan Institute of Management - Skill Development Council - Memon Industrial and Technical Institute |
| CBTA Qualifications Available | Banking: Maintenance Technology: | NVQF 2: Computer Operator; Office Assistant, Customer Service & Sales Assistant; NVQF 3: Call Centre Agent; Web Designing & Development; Logistics & Supply Chain Assistant; NVQF 4: E-commerce NVQF 2: Heat, Ventilation & Air-conditioning (HVAC); Industrial Electricity; Electrical Equipment Installation & Repair; Electro Mechanical Technology; Electronic Home Appliance Technician. NVQF 3: Mechatronics Technician; NVQF 1-3; Building Electricity, 1-3 Plumbing-cum-Solar Water Heating Technology NVQF 5: Energy Efficiency Advisor | | | |