



**OCCUPATIONAL ANALYSIS
HANDICRAFT SOUVENIR INDUSTRY**



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ABSTRACT

An Occupational Analysis (OA) is the process of identifying the work scope of the occupational sub-area in terms of competencies. It is used to analyze skilled human resource competency requirement for the industry. The development of the Occupational Structure is a preliminary process in developing relevant National Occupational Skills Standard (NOSS). The NOSS in turn will be developed to be used as the basis to conduct skills training and certification of competent personnel. This document is divided into several chapters, the first being an industrial overview highlighting the definition and scope of the industry, the current analysis of the local industry and its skilled worker requirements, Government bodies and development plans supporting the growth of the industry, then the next chapter will explain the methodology used in Occupational Analysis development such as qualitative analysis through brainstorming discussion sessions and quantitative methods done on the industry. Workshops were held to get a better understanding of the organizational structure, job titles, hierarchy objectives and main activities of the specified positions. The final chapters will present the findings of the Occupational Analysis that is translated into the Occupational Structures, levels of competencies and critical job titles. These findings will in turn be the basis of reference for the development of the National Occupational Skills Standard (NOSS) document. The NOSS will serve not only as a reference of skills standards for certification but also as a guide to develop the skills training curriculum. In order to conduct the Occupational Analysis on the Handicraft Souvenir Industry, all the information related to the aforesaid industry was gathered through literature review and further discussed in workshop sessions with experts from the industry. Based on the findings, a total of 5 main sub-sectors, 85 critical job titles and 127 job titles have been identified under the Handicraft Souvenir Industry. The 5 sub-sectors are Metals Craft, Forest Based Craft, Textiles Craft, Ceramic Craft and Various Crafts.



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LIST OF ABBREVIATIONS

DESCUM	Development of Standard and Curriculum
DSD	Department of Skills Development
ETP	Economic Transformation Programme
EPP	Entry Project Point
GDP	Gross Domestic Product
GNI	Gross Net Income
OA	Occupational Analysis
OAA	Occupational Area Analysis
OD	Occupational Description
OS	Occupational Structure
OAS	Occupational Area Structure
MOSQF	Malaysian Occupational Skills Qualification Framework
MQA	Malaysia Qualifications Agency
MSC	Malaysian Skills Certificate
NOSS	National Occupational Skills Standard



1. INTRODUCTION

1.1 CHAPTER INTRODUCTION

This chapter will explain the objectives, scope and problem statement of the Occupational Analysis for the Handicraft Souvenir Industry.

An Occupational Analysis (OA) is the process of identifying the sub-sectors, areas, sub-areas and job titles for a particular industry in the form of Occupational Structure (OS). The Occupational Analysis (OA) will also look at other elements such as common job titles and levels of competency for skilled personnel in the industry, job functions, industry overview, skills demand and individual job descriptions. Every job title will be identified according to its level defined in the Malaysian Occupational Skills Qualification Framework (MOSQF) level descriptor (refer to Annex 1). It must be highlighted that the occupational structure should not reflect the organizational chart but rather the competency levels and possible career path for personnel under a particular sub-sector in the industry.

The OA requires input from all parties especially industry players, statutory bodies, training institutions among others. The identified job titles obtained during the OA will be used as reference during National Occupational Skills Standard (NOSS) development. By developing the NOSS, personnel in the industry can be deemed certified by undergoing three methods of skills training certification. The first of the three methods are certification through full time training where the candidate will undergo training from a minimum of 3 months for entry level certificates (Malaysia Skills Certificate 1,2 and 3) or up until over a year for Malaysian Skills Diploma or Advanced Diploma. The second method is via the apprenticeship scheme which is called the National Dual Training System (NDTS) where the candidate can undergo training for a certain block of time then be attached to a company in the related industry as approved by the Department of Skills Development, Ministry of Human



Resources. The third method is via Accreditation of Prior Experience where the candidate that possesses working experience may be able to be certified based on duration of experience and proof of work.

Therefore, it can be said that with the development of the OA and subsequently the relevant NOSS will provide wider opportunities for personnel to be trained and certified.

1.2 BACKGROUND OF THE HANDICRAFT SOUVENIR INDUSTRY

In the light of recent economic development plans by Malaysia and recognition of Malaysian creative talent in the Handicraft Souvenir Industry, the demand for sufficient skilled personnel has increased and the development of skilled manpower is timely. The Handicraft Souvenir Industry is related closely with the Tourism Industry in terms of promoting Malaysia's many handicrafts made from natural resources such as metals, ceramic, forest based or textiles which all represent the rich cultural identity of Malaysia's multiethnic people. The Handicraft Souvenir Industry regards the handicrafts produced locally that highlight Malaysia's cultural identity and uniqueness and serve as souvenirs for tourists or even locals alike.

1.3 OBJECTIVES OF THE HANDICRAFT SOUVENIR INDUSTRY OCCUPATIONAL ANALYSIS

The objectives of this Occupational Analysis are as below:

- i) To identify the Occupational Structure and Occupational Area Structure of the Handicraft Souvenir industry ;and
- ii) To conduct a supply and demand analysis of the Handicraft Souvenir industry workforce.



1.4 SCOPE OF OCCUPATIONAL ANALYSIS

The scope of this occupational analysis relevant to the objectives above is as follows:

- i) Objective 1 : To identify the Occupational Structure and Occupational Area Structure of the Handicraft Souvenir industry

The scope of this particular OA is focused on the Handicraft Souvenir Industry and all sub-sectors that are defined to be under the Handicraft Souvenir Industry. These sub-sectors are defined in line with local industry segmentation.

- ii) Objective 2 : To conduct a supply and demand analysis of the Handicraft Souvenir industry workforce

The demand side data referred in the supply and demand analysis was secondary data obtained from the Department of Statistics, Malaysia where the 3 digit group for the statistics was cross referenced with the 3 digit groups of industrial classification obtained from the Malaysian Standard Industrial Classification (MSIC) which were relevant to the industry.

Whereas, supply side data includes data from the Department of Skills Development, Community College Department, Public Higher Learning Institutions and the National Craft Institute. Data from the Private Higher Learning Institutions had to be omitted due to inconsistency as data was not available for all the 3 years analyzed in this research.

1.5 PROBLEM STATEMENT

There have been various National Occupational Skills Standard (NOSS) documents developed for the Handicraft Souvenir Industry covering various



areas especially under Production. (Details of the existing NOSS relevant to the Handicraft Souvenir Industry are included in Chapter 2).

However, a complete analysis on the Occupational Structure of the Handicraft Souvenir Industry has not been undertaken before this. Therefore, in order to identify the overall structure and available career paths in the industry, the Occupational Analysis must be done on this industry.

1.6 CHAPTER CONCLUSION

With the Occupational Structure of the Handicraft Souvenir Industry clearly defined, the industry stakeholders will be able to identify sub-areas that will require more intensive efforts in human capital development. Although there have been past efforts in National Standards Development for the industry, the need for an Occupational Analysis is required to determine the overall sub-areas that may not yet have been focused on. The Occupational Structure that will be the outcome of this analysis can be utilized as a 'blueprint' for manpower planning in the Handicraft Souvenir Industry.



2. OVERVIEW OF THE HANDICRAFT SOUVENIR INDUSTRY IN MALAYSIA

2.1 CHAPTER INTRODUCTION

This chapter will focus on the explanation of the Handicraft Souvenir Industry, the current scenario in Malaysia, introduction to relevant acts, government bodies and benchmark countries pertaining to the Handicraft Souvenir Industry.

Findings in this chapter were obtained via literature review, interviews with industry practitioners and discussions during workshops with development panel members. This literature review has been further discussed with panel members to obtain insight on the matters at hand from a practitioner's perspective.

2.2 DEFINITION OF THE HANDICRAFT SOUVENIR INDUSTRY

Collective terms for handicrafts include artisanry, handcrafting, crafting, and handcraftsmanship.

The definition of handicraft by UNESCO (definition adopted by the UNESCO/ITC Symposium "Crafts and the international market: trade and customs codification" - Manila, 6-8 October 1997)

“Artisanal products are those produced by artisans, either completed by hand, or with the help of hand tools or even mechanical means, as long as the direct manual contribution of the artisan remains the most substantial component of the finished product. These are produced without restriction in terms of quantity and using raw materials from sustainable resources. The special nature of artisanal products derives from their distinctive features, which can be utilitarian, aesthetics, creative, culturally attached, decorative, functional, traditional, religiously and socially symbolic and significant”¹

¹Definition of Handicraft by UNESCO.

http://www.academia.edu/4095403/DEFINITION_OF_HANDICRAFT_BY_UNESCO_d



Handcrafting has its roots in the rural crafts—the material-goods necessities—of ancient civilizations and many specific crafts have been practiced for centuries, while others are modern inventions, or popularizations of crafts which were originally practiced in a limited geographic area.

“Souvenir (from French, for *a remembrance or memory*), memento, keepsake, or token of remembrance is an object a person acquires for the memories the owner associates with it. A souvenir can be any object that can be collected or purchased and transported home by the traveler as a memento of a visit. The object itself may have intrinsic value, or simply be a symbol of past experience.”²

The tourism industry designates tourism souvenirs as commemorative merchandise associated with a location, often including geographic information and usually produced in a manner that promotes souvenir collecting. Throughout the world, souvenir trade is an important part of the tourism industry serving a dual role, first to help improve the local economy, and second to allow visitors to take with them a memento of their visit, ultimately to encourage an opportunity for a return visit, or to promote the locale to other tourists as a form of word-of-mouth marketing.

The Handicraft Souvenir industry includes the design, creation and production of products made from various materials such as wood, metals, fabric and ceramic. Most souvenirs and handicraft in Malaysia are influenced by the multiracial communities. The Handicraft Souvenir Industry is an industry that involves creativity, skills and talent that has the potential of developing careers and wellbeing through the exploitation of individual intellectuality in the form of creative ideas that have tangible products.

²Online Etymology Dictionary. <http://www.etymonline.com/index.php?term=souvenir>



2.3 CURRENT NATIONAL OCCUPATIONAL SKILLS STANDARDS (NOSS) RELATED TO THE HANDICRAFT SOUVENIR INDUSTRY

In order to analyze the industry, the existing National Occupational Skills Standard (NOSS) were referred. In the DSD's NOSS Registry, the existing NOSS can be seen in the following figures included in this section.

Table 2.1: NOSS Relevant to the Handicraft Souvenir Industry

	Songket & Daster(<i>Songket & Daster</i>)	Pua(<i>Pua</i>)	Tapestri(<i>Tapestry</i>)
L5	SS-142-5 Pengurus Industri Tenunan <i>Weaving Industry Manager</i> (8-07-99) (23-06-2009)		
L4	SS-142-4 <i>Eksekutif Industri Tenunan</i> <i>Weaving Industry Executive</i> (8-07-99) (23-06-2009)		SS-140-4 Pereka Tenunan <i>Weaving Designer</i> (19-07-2001) (23-06-2009)
L3	SS-142-3 Penyelia Songket & Daster <i>Senior Weaver Songket & Daster</i> (24-09-98) (23-06-2009)	SS-141-3 <i>Penyelia Tenunan Pua</i> <i>Pua Weaving Supervisor</i> (24-09-98) (23-06-2009)	SS-140-3 Penyelia Tenunan Tapestri <i>Tapestry Weaving Supervisor</i> (17-12-98) (23-06-2009)
L2	SS-142-2 <i>Penenun Kanan Songket & Daster</i> <i>Senior Weaver Songket & Daster</i> (24-09-98) (23-06-2009)	SS-141-2 <i>Penenun Pua Kanan</i> <i>Senior Pua Weaver</i> (24-09-98) (23-06-2009)	SS-140-2 Penenun Kanan Tapestri <i>Senior Tapestry Weaver</i> (17-12-98) (23-06-2009)
L1	SS-142-1 <i>Penenun Songket & Daster</i> <i>Weaver Songket & Daster</i> (24-09-98) (23-06-2009)	Tiada Tahap <i>(No Level)</i>	SS-140-1 Penenun Tapestri <i>Tapestry Weaver</i> (17-12-98) (23-06-2009)

(Source: DSD NOSS Registry April 2014)



Table 2.1: NOSS Relevant to Handicraft Souvenir Industry (continued)

	Batik Canting	Batik Blok	Batik Silk Screen	Batik Contemporary
L5	SS-100-5:2013 Pengurusan Pengeluaran Batik <i>Batik Production Management</i> (18-11-08) (30-12-2013)			
L4	SS-100-4:2013 Pengeluaran Rekabentuk Batik <i>Batik Designing Production</i> (08-07-99) (19-07-01) (18-11-08) (30-12-2013)			
L3	SS-100-3:2013 Operasi Pengeluaran Batik <i>Batik Production Operation</i> (17-12-98) (08-07-99) (18-11-08) (30-12-2013)			
L2	Tiada Tahap			
L1	(No Level)			

(Source: DSD NOSS Registry April 2014)

Table 2.1: NOSS Relevant to Handicraft Souvenir Industry (continued)

	Ukiran Kayu (<i>Wood Carving</i>)	Ukiran Logam (Barangan Kasar) (<i>Metal Smithing</i>)	Ukiran Logam (Barangan Kemas) (<i>Jewelery Crafting</i>)	Pewter (<i>Pewter</i>)
L5	Belum Ada			
L4	(Not Available)			
L3	SS-200-3:2013 Pengkiran Kayu <i>Wood Carving</i> (27-02-2003) (30-12-2013)	S-021-3 Penyelia Ukiran Barangan Kasar Logam <i>Metal Smithing</i> Supervisor (27-02-2003)	S-022-3 Penyelia Barang Kemas <i>Jewelery Supervisor</i> (27-02-2003)	SS-070-3 Pereka Pewter <i>Pewter Designer</i> (18-11-08)
L2	SS-200-2:2013 Pengkiran Kayu Asas <i>Basic Wood Carving</i> (27-02-2003) (30-12-2013)	S-021-2 Jurukraf Barangan Kasar Logam Kanan <i>Senior Metal Smithing</i> Craft Man (27-02-2003)	S-022-2 Jurukraf Barang Kemas Kanan <i>Senior Jewelery Craft</i> Man (27-02-2003)	SS-070-2 Pembuat Acuan dan Rekaan Pewter <i>Pewter Pattern and</i> <i>Mould Maker</i> (18-11-08)
L1	Tiada Tahap (No Level)	S-021-1 Jurukraf Barangan Kasar Logam <i>Metal Smithing Craft</i> Man (27-02-2003)	S-022-1 Jurukraf Barang Kemas <i>Jewelery Craft Man</i> (27-02-2003)	Tiada Tahap (No Level)

(Source: DSD NOSS Registry April 2014)



Table 2.1: NOSS Relevant to Handicraft Souvenir Industry (continued)

	Seni Kraf Seramik (<i>Ceramic Craft</i>)	Seni Sulaman (<i>Embroidery Art</i>)
L5	SS-023-5:2013 Pengurusan Pengeluaran Kraf Seramik <i>Ceramic Craft Production Management</i> (30-12-2013)	Belum ada (<i>Not Available</i>)
L4	SS-023-4:2013 Pentadbiran Pengeluaran Kraf Seramik <i>Ceramic Craft Production Administration</i> (30-12-2013)	
L3	SS-023-3:2013 Pengeluaran Kraf Seramik <i>Ceramic Craft Production</i> (19-06-2003)(30-12-2013)	SS-024-3:2013 Seni Sulaman Warisan <i>Art of Heritage Embroidery</i> (30-12-2013)
L2	Tiada Tahap (<i>No Level</i>)	
L1		

(Source: DSD NOSS Registry April 2014)

Table 2.1: NOSS Relevant to Handicraft Souvenir Industry (continued)

	Kraf(<i>Craft</i>)
L5	Belum ada (<i>Not Available</i>)
L4	
L3	SS-101-3 Jurukraf Kanan Rotan <i>Senior Rattan Crafter</i> (23-06-2009)
L2	SS-101-2 Jurukraf Rotan <i>Rattan Crafter</i> (23-06-2009)
L1	SS-101-1 Jurukraf Muda Rotan <i>Junior Rattan Crafter</i> (23-06-2009)

(Source: DSD NOSS Registry April 2014)



Table 2.1: NOSS Relevant to Handicraft Souvenir Industry (continued)

	Tukang Perak (Silver Craftman)	Pembuat Acuan (Mould Maker)
L5	<i>Belum ada (Not Available)</i>	
L4		
L3	SS-201-3 Tukang Perak Kanan <i>Senior Silver Craftman</i> (25-10-10)	SS-202-3 Pembuat Kanan Acuan Kraftangan <i>Senior Souvenir Mould Maker</i> (25-10-10)
L2	SS-201-2 Tukang Perak <i>Silver Craftman</i> (25-10-10)	SS-202-2 Pembuat Acuan Kraftangan <i>Souvenir Mould Maker</i> (25-10-10)
L1	SS-201-1 Pembantu Tukang Perak <i>Assistant Silver Craftman</i> (25-10-10)	SS-202-1 Pembantu Pembuat Acuan Kraftangan <i>Assistant Mould Souvenir Maker</i> (25-10-10)

(Source: DSD NOSS Registry April 2014)

Table 2.1: NOSS Relevant to Handicraft Souvenir Industry (continued)

	Keris & Parang (Keris & Parang)	Kaca Kristal (Kristal Glass)	Pembuatan Wau/ Layang- Layang (Wau/Layang-Layang Production)
L5	<i>Belum ada (Not Available)</i>		
L4			
L3	SS-203-3:2012 Pembuatan Keris & Parang <i>Keris & Parang Production</i> (18-12-2012)	SS-204-3:2012 Pembuatan Kaca Kristal <i>Crystal Glass Production</i> (18-12-2012)	SS-205-3:2012 Pembuatan Wau / Layang-Layang <i>Wau / Layang-Layang Production</i> (18-12-2012)
L2	<i>Tiada Tahap (No Level)</i>		
L1			

(Source: DSD NOSS Registry April 2014)

The previous NOSS as shown above have been grouped either by material, production process or product. Therefore it is imperative that this Occupational Analysis is conducted in order to define and clarify the segmentations in the Handicraft Souvenir Industry in a more consistent structure.



2.4 CURRENT ANALYSIS OF THE HANDICRAFT SOUVENIR INDUSTRY IN MALAYSIA

In many developing nations, the handicraft sector is increasingly developed to cater the tourist market. This strategy, not only aimed at introducing new economic income to the local community but also to preserve and revive the traditional culture. The relationship between the growth of handicraft and tourism justifies the support for local handicraft development.

Handicraft is a unique expression of art which represents a culture, tradition & the heritage of a specific country. It beautifully keeps the age old culture alive & maintains the craft's exotic legacy & tradition. Every country has its own unique handicraft style bringing forth the diverse historical aspects in beautiful forms of handicrafts. Highlighted with distinct designs & finishes, the handicraft items speak loud & clear about the excellent artistic skills of craftsmen which makes the pieces absolutely invaluable. Being a subset of the Tourism Industry, the Handicraft Souvenir Industry has benefitted favorably from the stable economic status of the tourism industry. Indeed, the growth of the tourism sector has opened up new employment opportunities across diverse industries such as retail, food and beverage, accommodation, transport and handicrafts. Tourism is the second largest foreign exchange earner after manufactured goods and the seventh largest contributor to the Malaysian economy.

Culture is a unique proposition for tourists where a major draw is Malaysia's diversity of people and cultures that include Malay, Chinese, Indian and the traditional tribes in Sabah and Sarawak. Tourism and culture not only offers enjoyable experiences for visitors, but also creates greater understanding among different people and enriches the life experiences of the residents, renewing their pride in their heritage and their desire to preserve it. The many tourists visiting heritage sites in Malaysia helps to boost the craft sales at these heritage sites.



Moving towards 2020, Malaysia has set a target of 36 million tourist arrivals with revenue of RM168 (USD52.8) billion. Malaysia's tourism also aspires to contribute RM103.6 (USD32.6) billion in Gross National income (GNI) and create half a million new job opportunities.

The global handicrafts industry accounts for a market share of 100 billion. This industry plays a dominant role in the economic development of the rural mass of every country and earns substantial foreign exchange. Handicraft is a part of almost every country where the artisans & craftsmen indulge in bringing forth the rich heritage of any country focusing on its history, culture & tradition.

The art of craft making is not only a heritage that needs to be preserved due to its aesthetic value but also for its socio-economic contribution for the society. Therefore we should enhance awareness and interest in utilizing local craft, developing products of quality that is orientated to the market demands, widen the market for the craft products, encourage growth and develop the craft industry and provide trained manpower according to the needs of the industry.

2.5 HANDICRAFT SOUVENIR INDUSTRY GOVERNMENT AGENCIES, ORGANISATIONS AND TRAINING PROVIDERS

- (i) Ministry of Tourism and Culture (*Kementerian Pelancongan dan Kebudayaan*)

Below are the roles of the ministry in developing tourism and culture in Malaysia

- To provide quality and timely tourism services.
- To provide quality tourism activities/programmes in order to promote the involvement and appreciation of society for the tourism industry.
- To provide high quality and viable tourism infrastructures throughout the country.



- To fully enforce and implement provisions in the Tourism Industry Act, Tourism Vehicles Licensing Act including regulations made there under in an effective and efficient manner.
- To promote the country as a premier tourist destination at domestic and international levels.

(ii) Malaysian Handicraft Development Corporation (MHDC)

Malaysian Handicraft Development Corporation (MHDC) has been established on 1st of October 1979 under the Act 222, Malaysian Handicraft Development Corporation Act, 1979 and Act 562, Malaysian Handicraft Development Corporation Act (Amendment), 1983. MHDC is an agency under The Ministry of Information Communication and Culture with a vision to lead the growth development and promotion of the steadfast and competitive Malaysia crafts industry. To achieve that goal, MHDC has drawn five Development Programmes, which comprises of Research and Development Programme, Market Development and Promotion Programme, Craft Entrepreneur Development Programme, Craft Skills Training Programme, and Craft Conversation Programme. As a leader in the development, promotion and expansion of the competitive yet stable craft industry, MHDC continuously stresses on the execution of its core services:

- To increase the sales of local crafts products at domestic and international level
- To be a driving force and leader in developing a competitive craft product in the domestic and global market
- To increase the number of craft entrepreneurs who are innovative as well as experts and are eager to compete in the market
- To create future workforces in the craft industry
- To restore and protect heritage craft



(iii) National Craft Institute

Establishment of the National Craft Institute (NCI) has been approved by Cabinet in August 2001. It represents a traditional moment (turning point) is important as well as being a landmark in the development of the industry in the country. This is where the onset on NCI's role as an educational institution that is responsible for producing graduates who are knowledgeable human capital and skills in the field of crafts. The craft skills training programs have been centered on the Malaysian Handicraft Complex in Rawang, Selangor. In 1999, it has partnered with the National Vocational Training Councils (NVTC), now known as the Department of Skill Development (DSD) in the development of skills training curriculum.

Beginning in 2000, the field of study has expanded to six (6) degree of Craft Batik, weaving, ceramics, wood, metal and rattan. Students who have completed the training were awarded the Craft Skills certificate. In August 2001, Cabinet agreed to the establishment of the institute to be accredited in awarding diplomas and certificates to the students. Starting in the academic session 2002/2003, the institute embarked on the recruitment of new students at diploma level in areas of Art Craft Batik, weaving, ceramics, wood, metal and rattan.

(iv) Malaysia External Trade Development Cooperation (MATRADE)

MATRADE's mission to promote Malaysia's export has enabled many local companies to carve new frontiers in global markets and now continue to put the spotlight on capable Malaysian companies on the international stage, hence making the phrase 'Made-In-Malaysia' synonymous with excellence, reliability and trustworthiness. MATRADE's functions are:



- To promote, assist and develop Malaysia's external trade with particular emphasis on the export of manufactured and semi-manufactured products and, on a selective basis, imports;
- To formulate and implement a national export marketing strategy to promote the export of manufactured and semi-manufactured products;
- To undertake commercial intelligence and market research and create a comprehensive database of information for the improvement and development of trade;
- To organize training programmes to improve the international marketing skills of the Malaysian exporters;
- To enhance and protect Malaysia's international trade interests abroad;
- To represent Malaysia in any international forum in respect of any matter relating to trade;
- To develop, promote, facilitate and assist in service areas related to trade; and
- To advise the Government on matters affecting or in any way connected with trade and to act as the agent of the Government or for any person, body or organization on such matters.

MATRADE is also actively involved in assisting foreign companies to source for suppliers of Malaysian products and services, and is represented worldwide at 40 locations in major commercial cities. In Malaysia, MATRADE has five local branches in Penang, Terengganu, Johor, Sabah, and Sarawak.

(v) World Craft Council

The council is an international council comprising of National Entities in 101 countries and territories. The council aims to offer encouragement, help and



advice to craftsmen and foster wider knowledge and recognition of their work with due regard to separate cultural and national backgrounds and traditions of members.

(vi) Handicraft Associations

There are many handicraft associations in Malaysia consisting of handicraft organizations that produce and promote local crafts. Each category of handicraft (i.e Textile Craft, Forest Based, Metal Craft) has its respective association. Some of the associations are as listed below:

- Malaysia Handicraft Association (*Persatuan Pengusaha kraf Malaysia*)
- Malaysia Batik Association
- *Persatuan Pengusaha Pembatik Terengganu*
- *Persatuan Batik Kelantan*
- *Persatuan Pengeriat Seni Ukir Kayu Malaysia (PENGUKIR)*
- *Etc.*

2.6 HANDICRAFT SOUVENIR INDUSTRY ACTS AND DEVELOPMENT PROGRAMMES

(i) Malaysian Handicraft Development Corporation Act 222 1979

Act 1979 an Act relating to the Malaysian Handicraft Development Corporation (MHDC) and the handicraft industry. This act described "handicraft product" means any artistic product which is graced with cultural or traditional appeal and is the outcome of any process which is dependent solely or partly on manual skill. The MHDC's responsibilities include:

- to provide training facilities and to control and supervise the implementation of training projects and programmes;
- to bring about sufficient production of handicraft products for export purposes;
- to develop and supply raw materials for the use of the handicraft industry;



- to provide plant, machinery, equipment, and tools required by the handicraft industry;
- to disseminate information to the public on the various aspects of the handicraft industry;
- to conduct research towards raising the standards of the handicraft industry;
- to provide incentives in any form or manner for the handicraft industry;
- to establish centres, subcentres, workshops, and other premises for the undertaking of research and other activities necessary for the development of the handicraft industry;
- to establish warehouses for the storage of handicraft products and raw materials for making handicraft products;
- to carry on the business of producing, marketing, and exporting handicraft products on a commercial basis;
- to receive, in consideration of the services rendered by the MHDC, such commission or payment as may be agreed upon; and
- to prescribe and levy fees or other charges in respect of facilities, services, plant, machinery, equipment, tools and raw materials provided by the MHDC in the performance of its duties and the exercise of its powers under this Act.

(ii) One District One Industry (*Satu Daerah Satu Industri*)

One of the main activities under the Craft Entrepreneur Development Programme conducted by Kraftangan Malaysia is the One District One Industry Project (SDSI). It aims to develop a district or a localised area as the centre of craft production for its local crafts, managed commercially by local folks. This will also create job opportunities for locals through economic involvement in craft production that contributes towards a continuous and sustainable income. This initiative also creates a small and medium scale industry for craft that is managed commercially, resilient and competitively.



Kraftangan Malaysia so far has developed 69 of these projects compared with 16 when it was started in 2003. The areas covered are metal, jungle produce, ceramic and textile. Among the projects developed is weaving in Pekan, Pahang, batik in Kota Baharu, Kelantan, jungle products/wood carving in Temerloh, Pahang and bamboo and bemban craft in Serian, Sarawak. A total of 691 craft entrepreneurs were successfully trained under the SDSI project and this provided employment opportunities for 3,165 people. Kraftangan Malaysia's state offices monitor the entrepreneurs periodically especially in terms of the orders and the sales that they record. The needs of the entrepreneurs are also taken into consideration that among others involve production and design. Facilities and services offered to further facilitate this initiative are as below:

- Work force development and upgrading of skills.
- Training facilities for new and skilled work force at the entrepreneur's workshop.
- Sponsored workshop on upgrading technical knowledge and skills of the producer and his work force.
- Development of product for (mass) production and development of the production system.
- New design development and value added product to satisfy market preference and taste.
- Proposal on the company's production system lay out to ensure maximised space and production.
- Upgrading production facilities.
- Building new production workshop or upgrading the present workshop.
- Purchasing machinery and implements to improve production quantity and quality.
- Participation in promotion and marketing at domestic and international level.



- Productivity and quality development .
- Sponsored entrepreneur courses on topics such as company management, financial record and marketing.

2.7 INTERNATIONAL BENCHMARKS FOR THE HANDICRAFT SOUVENIR INDUSTRY : INDUSTRY SEGMENTATION IN OTHER COUNTRIES

A "benchmark" is a comparative measurement. It is a standard or point of reference used in measuring and judging quality or value. "Benchmarking" is the process of comparison. The process of continuously comparing and measuring an organization against business leaders anywhere in the world to gain information that will help the organization take action to improve its performance. This section looks at the segmentation of the handicraft industry in other countries and also looks at one example of job titles available in one of the countries in comparison to Malaysia.

In this context, the rich cultural countries of Asia such as India, China are deeply immersed in the production of handicraft items which are in high demand in the global market. The rich vibrant, colorful items have helped in establishing a grand market for these products. There are several establishments engaged in the manufacturing of pottery, ceramics, clay pieces, paintings, sculptures, antique furniture, textiles, paper craft etc. which help in generating revenues for the handicraft industry. These industries do provide additional employment & overall accounts for a market share of more than US\$100 billion. The Oceania countries mainly including Australia & New Zealand, are equally very much into the handicraft industry. Their industry is actually a group of many cottage industries focusing in the production of ceramic arts & crafts, jade jewellery, decorative hand blown glass, jewellery & paper crafts to name a few. The United States is one of the biggest contemporary market in the handicraft industry. It accounts for about US\$13.8



billion and has an approximately 127,000 people employed in the world's largest industry. Canada is also highly diversified and comprises of individual craft individuals, studios, enterprises, media guilds, public & private galleries and industrial organizations. It accounted for a total of over \$100 million exports & employs about 22,597 individuals in the handicraft sector.

Craft-trades play a significant role in most of the European countries The Crafts and small businesses employ more than 66% of Europe's workforce i.e. around 98 million people. The turnover of craft industry ranges from 25% to 55%. In Europe, small enterprises and craft businesses are a prominent source of jobs and a breeding ground for business ideas.

Below are some of the categories or main sub-sectors of the handicraft industry in various countries.

Table 2.2: Industry Segmentation in Other Countries

No	Continent/ Country	Segmentation (Sub- sectors/areas)	Leading Countries
1	Asia	Ceramics	India, Pakistan, Nepal, Sri Lanka, China, Iran, and UAE.
		Glass crafts	India, China, Iran, Iraq and Lebanon
		Fibre Craft	China, India, Bhutan, Pakistan, Nepal, Thailand
		Leatherwork	China, Korea, Thailand, India, Nepal and Bangladesh
		Wood crafts	Thailand, China and Nepal Sri Lanka and India
		Metal Crafts	India, Bhutan, Pakistan, Nepal and Sri Lanka
2	Europe	Ceramics	Germany, United Kingdom, Italy and France
		Leatherwork	Italy, Turkey, France, Russia, Romania, Poland, Hungary, Czech Republic, Bulgaria, Slovakia, Croatia,



No	Continent/ Country	Segmentation (Sub- sectors/areas)	Leading Countries
			Slovenia
		Needle crafts	Germany, France, Belgium and Italy
		Jewellery	Spain, France, Italy and Germany
		Giftware	United Kingdom, Europe are Italy, France, Germany, Spain, Sweden, Switzerland
3	Africa	Leatherwork	Ethiopia, Kenya, Nigeria and Morocco
		Ceramics	Morocco, Cameroon, Liberia, Gauteng, Eastern Cape, Kwa Zulu-Natal and Western Cape.
		Wood work	South Africa
		Masks	Benin, Nigeria, Sierra Leone, Egypt, Ghana, Sudan, Mauritania, Congo, Gabon, Senegal, Kenya, Morocco, Algeria, Libya, Cameroon, Ethiopia, and the Ivory Coast
		Musical Instruments	Sub Sahara

(Source: Craft central.com)

It can be seen from the table above, the common industry segments in other countries are as follows:

- Ceramics
- Wood Crafts
- Metal Crafts
- Leatherwork
- Jewellery
- Fibre Crafts/Needle Crafts
- Glass Crafts



The industry segmentation in other countries may serve as reference for the Handicraft Souvenir Industry Occupational Structure to be defined in Malaysia. However, the segmentation of the industry will also depend on the segmentation as defined by the handicraft industry authority bodies in Malaysia. The industry segmentation also depends on the natural resources that are most commonly found in a particular country.

2.8 CHAPTER CONCLUSION

It can be summarised in this chapter that the Malaysian Handicraft Souvenir Industry has great potential. Malaysia has many advantages and features that can be leveraged upon to make it internationally competitive such as a creatively talented workforce and rich cultural heritage.



3. METHODOLOGY

3.1 CHAPTER INTRODUCTION

This chapter describes the methodology of the overall Occupational Analysis process that was conducted throughout the Handicraft Souvenir Industry Occupational Analysis.

3.2 RESEARCH DESIGN

The research design that consists of the research method, data analysis methods and output required is as shown in the table below:

Table 3.1: Research Design

Objective	Research Method	Data Analysis	Output
Objective 1: To identify the Occupational Structure and Occupational Area Structure of the Handicraft Souvenir industry	Qualitative: <ul style="list-style-type: none">Literature reviewFocus Groups that consist of members representing different areas in the industry	<ul style="list-style-type: none">Thematic analysisMapping of industry job areas	<ul style="list-style-type: none">Scope of the Industry and its sub-sectors;Occupational groups of the sub-sector;Job title;Critical job title; andCompetency Levels (Level 1 – 8).
Objective 2: To conduct a supply and demand analysis of the Handicraft Souvenir industry workforce	Quantitative: <ul style="list-style-type: none">Demand side data was obtained from secondary data provided by the Department of Statistics (DOS)Supply side data was obtained from secondary data provided by DSD, National Craft Institute and various Ministry of Education departments	<ul style="list-style-type: none">Statistical Analysis (Linear Regression)	<ul style="list-style-type: none">Supply AnalysisDemand AnalysisSupply and Demand Gap AnalysisProjected Supply and Demand



Research initially consists of analysing available information on the Handicraft Souvenir Industry, followed by direct contact with those in the industry to obtain a general idea of the industry sub-sectors. A supply and demand analysis is then conducted to identify current and projected supply & demand gap analysis. Qualitative and quantitative approaches were selected as the methods of analysing data obtained throughout this study.

3.3 RESEARCH METHODOLOGY

This section elaborates on the different research methods used throughout the project and participating respondents. The methods utilised were focus group discussions, mapping and statistical analysis. Below are elaborations of each activity conducted with respondents.

3.3.1 Qualitative

(i) Literature review

A literature review on the Handicraft Souvenir Industry was carried out to get some insight of this industry in the context of the Malaysian scenario. The scope covered under this search includes definitions, the current analysis of the industry sub-sectors/areas and international examples of industry segmentation of its sub-sectors. The literature review findings were used as a guide to identify the scope of study and analysis.

(ii) Focus Group Discussions with industry members

Experts from the Handicraft Souvenir Industry were identified for further communication and contact. The lists of experts are included in the list of development panel members in Annex 2: List of Development Panel Members. However, there were also several references made by expert panels to industry experts that were not in the workshop.



In the Focus Groups with industry members, two (2) methods were adopted, namely; brainstorming and Development of Standard & Curriculum (DESCUM) session. The brainstorming and DESCUM sessions were attended by development panel members who discussed the different sub-sectors and areas. Facts obtained during the literature review were also discussed and presented to the development panel members. The presence of the key individuals or experts ensured that the development of the Occupational Analysis is current and relevant. The focus group workshop sessions are described in the following table.

Table 3.2: Focus Group Discussion Sessions

Date	Location	Activity	Participants	Method Used
4th – 5th June 2014	Silka Hotel Maytower, Jalan Munshi Abdullah	Occupational Structure Development Workshop	6	Focus Group
29 th August 2014	Silka Maytower hotel, Jalan Munshi Abdullah, Kuala Lumpur	Confirmation of Supply and Demand findings	4	Focus Group

The Focus Group Workshop as described above was conducted in order to identify the Occupational Structure and Occupational Area Structure. As many as 6 respondents were present and represented the main sub sectors of the industry.

The Handicraft Souvenir Industry was analysed using the above methodology to identify the following:

- (a) Scope of the Industry and its sub-sectors ;
- (b) Main areas;



- (c) Occupational groups of the sub-sector;
- (d) Job title;
- (e) Critical job title; and
- (f) Competency levels (Level 1 – 8).

3.3.2 Quantitative

The demand and supply data were obtained through the various sources as explained in the table below.

Table 3.3: Quantitative Data Sources

No	Type of Data	Data Sources
1	Demand data	Department of Statistics, Malaysian Standard Industry Classification codes (MSIC 2008)
2	Supply data	Skills Accredited Centres (Public & Private), National Craft Institute, Ministry Of Education

i. Demand Data :

The data obtained was statistics from the Department of Statistics that was grouped according to the MSIC group classifications. The MSIC groups were divided according to three digit codes that described a particular group of occupations in an industry.

Therefore in order to identify the relevant MSIC groups for the handicraft souvenir industry, the researcher had extracted the MSIC groups relevant to the keywords; handicraft, craft, souvenir, ceramic, metal craft, batik, weaving, songket, wood carving and etc. From here, the descriptions of these groups



were interpreted and mapped to the sub-sectors identified in the Occupational Structure in order to confirm the relevancy to the handicraft souvenir industry. This data was then filtered according to levels of qualifications (i.e. Certificate, Diploma and Degree) according to the scope of year 2011 until 2013.

ii. Supply data

Supply data was obtained from the main training providers under skills training and academic, which were the Accredited Centres under the DSD , National Craft Institute and the universities under the Ministry of Higher Education.

The programmes relevant to the handicraft souvenir industry were identified by searching using keywords such as handicraft souvenir, craft and design. This data was then filtered according to levels of qualifications (i.e. Certificate, Diploma and Degree) according to the graduation year between year 2011 until 2013.

3.4 DATA ANALYSIS

In order to come up with the outcome for the first objective of this study (Objective 1: Occupational Structure and Occupational Area Structure), the data was analysed through mapping, synthesis of discussion group findings and comparison of benchmarking samples. Whereas to produce the results required for the second objective (Objective 2: Supply and Demand Analysis), statistical analysis was applied. The data analysis methods are explained in the next section.



3.4.1 QUALITATIVE ANALYSIS: OCCUPATIONAL STRUCTURE AND OCCUPATIONAL AREA STRUCTURE DEVELOPMENT

Thematic analysis was used in qualitative research and focused on examining themes within data. This method emphasizes organization and rich description of the data set. Thematic analysis goes beyond simply counting phrases or words in a text and moves on to identifying implicit and explicit ideas within the data. Coding is the primary process for developing themes within the raw data by recognising important moments in the data and encoding it prior to interpretation. The interpretation of these codes can include comparing theme frequencies, identifying theme co-occurrence, and graphically displaying relationships between different themes. Most researchers consider thematic analysis to be a very useful method in capturing the intricacies of meaning within a data set.

The thematic approach was applied throughout the process of analysing the Occupational Structure of the industry. The Occupational Structure was analysed and defined based on the following processes:

- (a) Identification of industry scope and boundaries with other relevant industries

The identification of the industry scope is important so that when identifying the relevant sub-sectors and areas under the industry, it will define the segmentation of the particular industry to other relevant industries. This will eliminate the possibility of duplication between common areas. The rule of thumb is to avoid taking into account the organisation chart as this will include many other industries such as marketing, administration, human resources and public relations. These areas are common across various industries and have a



different set of skill sets. Grouping based on similar skill sets in terms of technical abilities is a determining factor.

(b) Identification of sub-sector/area/sub-area

The coverage of a sub-sector should be able to accommodate a number of areas and sub-areas where applicable. Sub-sectors are identified as being components of an industry and can be clustered in terms of classification, segmentation or process driven.

(c) Identification of job titles

In order to identify job titles, it is important to obtain consensus from expert panel members that the job title is common between organisations such as Small Medium Enterprises (SME) and Multi National Corporations (MNC) and is easily accepted by practitioners in the industry.

(d) Identification of Leveling

Leveling of a job title is done based on the level of competency required to be deemed competent at a specific designation. The level descriptors in Annex 1 are used as reference when determining the different levels relevant to a specific job title.

(e) Occupational Area Analysis

The Occupational Structure can be further analysed to produce its Occupational Area Structure (OAS) through Occupational Area Analysis (OAA). The occupational area analysis is a process of analysing the job scope of a particular area. This will help to ensure that the job titles are described not only based on



common use in the industry but also by their job scope. These OAS will be taken into consideration to be developed into NOSS sub-areas. Therefore the process of merging and shrinking must be done with keeping in mind of the mechanisms of training and certification based on the NOSS. Ultimately, we are able to produce multi-skilling and multi-tasking workers required by the industry in line with the high income economy policy. Nevertheless, in certain cases, due to the requirement of industry or regulations, merging is not necessarily required.

3.4.2 QUANTITATIVE ANALYSIS : STATISTICAL ANALYSIS

The techniques applied for the Supply and Demand Analysis were quantitative through statistical analysis. The data used for the supply and demand analysis comes from two primary sources:

- i. Supply-side data comes from the Department of Skills Development for Malaysian Skills Certification data, National Craft Institute and academic program completers data from the Ministry of Education's Higher Learning Institution departments. This data includes completers of all educational or training programs.
- ii. Demand-side data comes from the Department of Statistics Malaysia which is mapped to the Malaysian Standard Industry Classification codes (MSIC 2008). The MSIC is based on standard occupational categories to quantify labor in the respective industry sectors. These two sources are statistically reliable quantitative sources of supply and demand information available.

Quantitative analysis uses statistical techniques to develop datasets that inform workforce planning decisions.



Below are the techniques applied when analysing the statistical data:

i. Supply Analysis

Supply data was analysed by aggregate, levels of qualifications and by year of graduation.

ii. Demand Analysis

Demand data was analysed by aggregate, level of qualifications according to their respective years of entry into the workforce. After obtaining the numbers of workers for a particular year, in order to obtain the demand value, the data of the current year is subtracted from the previous year, for example:

$$\text{Demand for Year X} = \text{Number of workers for current year (Year X)} - \text{Number of workers for previous year}$$

The product of the above formula when found to be positive showed an increase of workers in the industry for a particular level of qualification and negatives showed that there might have occurred either termination of workers or migration of workers from the industry to other industries. The demand data was also mapped to the sub sectors of the Occupational Structure in order to analyse the relevancy of the demand data according to the different job areas.

iii. Supply and Demand Analysis

In order to identify the supply and demand gap, the following formula was applied:

$$\text{Supply and Demand Gap Year X} = \text{Supply data for Year X} - \text{Demand Data for Year X}$$



The product of the above formula when positive was considered as Oversupply, and when negative was considered as Undersupply of graduates for a particular occupational area.

iv. Projected Supply and Demand Analysis

Linear regression was specifically used in the supply and demand analysis for this industry where the time trend was drawn from data in year 2011 until year 2013 and projected until the year 2020. Extrapolation was used to project the future supply and demand for workers in the industry by entry qualification such as certificate, diploma and degree and aggregate.

The current workforce demographics are compared with previous years, in this study, data from the previous 3 years were analysed to see how they have changed and determine previous trends.

The regression analysis includes techniques for analysing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables. More specifically, regression analysis helps one understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed.

Regression models can predict a value of the 'Y' dependent variable given known values of the 'X' independent variables. Prediction within the range of values in the dataset used for a model is known as interpolation. Prediction outside the range of the dataset is known as extrapolation. Performing extrapolation relies strongly on the regression assumptions and model. Regression analysis is generally more reliable the more data is included in the regression model. The further the



extrapolation goes outside the data, the more room there is for the model to fail due to differences between the assumptions and the dataset.

3.5 LIMITATIONS

3.5.1 MSIC occupational classifications broader than Occupational Structures sub-sectors

The standard occupational groups defined in MSIC are broader than the sub-sectors as highlighted in the Handicraft Souvenir Industry Occupational Structures. This is taken into account in the interpretation of the findings that the demand data.

3.5.2 Difficulty in obtaining supply data from individual private higher learning institutions (IPTS)

Due to certain technical issues with the private higher learning department's information system at the point of research, the data for the private universities could not be extracted for the year 2012 and 2013, where only data for the year 2011 could be provided.

3.6 CHAPTER CONCLUSION

This chapter has elaborated on the methodology, research instruments used and data analysis techniques applied in the study. The development of the Occupational Structure and Supply & Demand findings will be presented in the next chapter, Chapter 4, Findings.



4. FINDINGS AND DISCUSSION

4.1 CHAPTER INTRODUCTION

The identified sub-sectors for the Handicraft Souvenir Industry were obtained through discussions with industry experts during the development workshop sessions and interviews.

4.2 HANDICRAFT SOUVENIR INDUSTRY OCCUPATIONAL STRUCTURE

The identified sub-sectors for the Handicraft Souvenir Industry were obtained through literature research and discussions with industry experts during the development workshop sessions and interviews. Based on the discussions held during development workshops and approval sessions, the development and approval panel members had identified that the main sub-sectors under the Handicraft Souvenir Industry in Malaysia were to be segregated into sub-sectors as below:

- Metals Craft
- Forest based Craft
- Textiles Craft
- Ceramic Craft
- Various Crafts

The Occupational Structures for these sub-sectors are included in this section, firstly the sub-sectors and relevant areas are shown, then following them will be the Occupational Structures that show the common job titles in the industry and are presented under each relevant sub-sector and area.

Following each Occupational Structure framework is an Occupational Area Structure that depicts the common job scope for each of the areas as defined in



their respective occupational structures. In the Occupational Area Analysis, sub-areas under the same area may be combined if the job scope is similar. This is to show the common responsibilities of the personnel regardless of job title, as job titles may vary between different institutions and organisations.

Below are the descriptions for each of the different sub-sector and area.

i) Metal Craft

Pewter, brass, gold and silver items are examples of metal-based handicrafts. Pewter is hand cast and not spun and therefore, stronger and heavier, enabling more intricate design varieties. Pewter is a soft metal and can be fashioned in finishes like matte satin, silver-like brilliant finish with patterned effects. The intricate motifs displayed on these items make the pewter a highly favoured souvenir for many visitors. Malaysia is internationally recognised as the world's leading pewter manufacturer for its craftsmanship and high standards. A wide range of designs and products are available ranging from tableware utensils to little collectible figurines of the fantasy world. Pewter is an alloy composed of tin and other metals. The molten metal which is 'lead-free' today, is poured into pre-heated steel mold, filed and polished. The pewter objects are then polished with "stone leaf" (*tetracerascandens*), a leafy tropical plant used to bring out the shine of pewter objects. The majority of pewter's products are still hand-made and presented in the form of fabulous gifts and mementoes ranging from teapots, candle stand, tableware's, accessories and others.

The beautiful decorative motifs of flora and fauna hammered out so delicately and painstakingly represent some of the hallmarks of Malaysian silverware that set it apart from those of other countries. Malaysian silverware ranges from the traditional betel nut tray, silver rose bowls, snuff boxes, jewellery boxes, bolster ends, the capping personal jewellery to belts and buckles are made of sterling silver. The range of silver craft jewellery design are available in the form of



stylized ethnic tribal to contemporary modern design. Kelantan is famous for its beautiful silver jewellery, earrings, brooches, bracelets and tie clips as well as the popular *cucuk sanggul* (hairpin) and *kerongsang*.

Brassware is another popular art of craftsmanship amongst the residents of East Coast of Malaysia. This yellowish alloy made of zinc and copper has been in existence since the day of Dong Son period, an era of emerging metal prowess. A wide range of products are made from brass ranging from items used in special occasions such as traditional wedding ornaments to its application in utensils, decorative items, corporate gifts and accessories.

The Occupational Structure is divided into Design and Production, where under the Production area, the job areas of the craftsman are segmented between the different types of metal. The Production area is divided into two sub areas which are the Pewter sub area and Silver, Gold, Copper and Brass sub area. This is due to the different skills required to produce the different metal crafts. The types of metal craft that can be produced in these areas are either Jewellery or Wares which are differentiated by the size and production techniques for each category. The entry level for the Design area starts at Level 3 as Assistant Designers, and then they will progress as Designers at Level 4, Senior Designers at Level 5 and Design Specialist at Level 6. Those under the Production area will start as Assistant Craftsman at Level 2 and then to Level 3, as a Craftsman and may proceed as Senior Craftsman at Level 4. Then they may proceed until Level 5 as Production Managers whom will supervise the production process. Personnel at Level 6, which are the Production Specialists, will be responsible for managing and developing the production process to ensure its quality and cost effectiveness. The highest level of recognition for craftsmen are as the Master Craftsman at Level 7 where prior to that they will be deemed Production Specialists given they fulfill competencies at Level 6. The Master Craftsman is recognized to be highly competent in not only the production of the craft but



also the design of the craft. These Master Craftsman serve as reference regarding their craft's respective industry.

ii) Forest based craft

The rain forest of Malaysia produces a variety of valuable forest-based-fibres such as *rattan, bamboo, ribu-ribu, bemban, mengkuang, serdang* and *pandanus*.

It can be seen in the Occupational Structure that the Production sub-area is divided into the types of forest based material which are either made from wood or from rattan, bamboo and other material that can be weaved to produce forest based crafts. This segmentation is due to the different techniques used to produce the crafts from the respective material. Rattan or cane are usually used for furniture, while smaller and more delicate varieties are woven into colourful and multi-functional baskets ranging from waste paper basket to picnic hampers. Bamboo fibres too plays an important role in local culture such as all-purpose boxes, bowls to pencil holders and furniture. The patience and determination in weaving strips of bamboo and other selected leaves produce the most attractive and useful weaving products. Bamboo that is cut, lathed, smoothed and shaped to the required design has given rise to bamboo carvings - a handicraft specialty of Sarawak. The ribu-ribu of Sabah or *Lygodium* are woven from the twines of the creeper fern by the ethnic Rungus people in Kudat. This fibre craft is a speciality of Sabah. The stems are woven together with rattan and fashioned into beautiful and fantastic handicraft items such as pill boxes, baskets, fruit bowls, trays, coasters, placemats as well as handbags. Traditionally, the ribu-ribu containers were used for the storage of betel nuts.

Producing crafts from wood require different techniques, tools and technology. Dedicated agencies focus on researching the technology to enhance and facilitate the production of crafts made from wood though most wood carvings are usually hand carved. Malaysia is blessed with bountiful timber species of



various strength, characteristic and quality. The rain forest of Malaysia produces most of the finest woods recognised globally are *jati (teak), nyatoh, belian, meranti, keruing, mahogany* and oak. The variety of woods are carefully carved manually to showcase the symbiosis of nature and mankind, then transformed to produce wood carving products in the form of furniture, wall panels, sculptures, bowls and decorative items for gifts and distinguish mementoes.

The entry level for the Design area starts at Level 3 as a Design Assistant and then the personnel proceeds as Designers at Level 4, Senior Designers at Level 5 and as Design Specialists at Level 6. Those under the Production area will start as Assistant Craftsman at Level 2, Craftsman at Level 3 and may proceed as Senior Craftsman at Level 4. Then they may proceed until Level 5 as Production Managers whom will supervise the production process. Personnel at Level 6, which are the Production Specialists, will be responsible for managing and developing the production process to ensure its cost effectiveness and quality. The highest level of recognition for Craftsman is as the Specialists given they fulfill competencies at Level 6. Master Craftsman will require a high level of designing and craft production competencies.

iii) Textiles Craft

The Textile Craft Sub-sector is divided into the main areas which are Design and Production. The Production sub-area is divided according to the different techniques of producing textile crafts such as Batik, Embroidery and Weaving which is further divided into *Songket, Pua, Daster* and Tapestry.

Batik is a well-known textile product from Malaysia and it is best known for its designs and the creativity of the artisans showcasing the relationship between human and nature via the motives of the designs.



Batik is defined as below:

“from Dutch, from Malay batik, said to be from amba "to write" + titik "dot, point³."

Malaysian Batik design is in the integration/combination of dots that make up the motifs of the genuine batik and various floral, leafy, oceanic, and other motifs while at the same time, Malaysian batik is also well known to include vibrant coloured tones making it vibrant, presentable and appealing to designers and customers. Primarily, there are two main types of batik which are produced in Malaysia today. The first type is the hand-painted Batik or is also called Batik *canting* and the second type is block-printed Batik. The difference between the two types lies in the production techniques, motif and aesthetic expressions; each is often classified according to the tools used during the production of the textile. The evolution of Batik can be seen in its usage where it's functionality has been extended from being used as *Sarongs* to more versatile purposes in casual dresses, caftans, kimonos, *pareos*, *bermudas*, shorts, scarves, ties, clothes, home decorations and others.

Songket is a piece of breathtaking traditional Malay fabric which belongs to the brocade group of textiles. It is woven in silk or cotton threads and the *songket* patterns are formed by interweaving gold or coloured metallic threads using the supplementary weft technique. Regarded as works of art, decorating hotels and homes, no other fabric in the world is held by such esteem by Malaysians who regard the *songket* as the 'King of Malaysian Textile'.

The Occupational Structure is divided into Design and Production, where under the Production area, the job areas of the craftsman are segmented between the different techniques of producing or making textile crafts.

³Online Etymology Dictionary.2010. Douglas Harper



The entry level for the Design area starts at Level 3 as a Design Assistant and then proceed as Designers at Level 4, Senior Designers at Level 5 and as Design Specialists at Level 6. Those under the Production area will start as Assistant Craftsman at Level 2, Craftsman at Level 3 and may proceed as Senior Craftsman at Level 4. Then they may proceed until Level 5 as Production Managers whom will manage the production process. Personnel at Level 6, which are the Production Specialists, will be responsible for managing and developing the production process. For the Batik sub-area in particular, the Production Specialists will be responsible for determining the suitable production process which may include the design of the mould used in the Block technique.

The highest level of recognition for Craftsman are as the Master Craftsman at Level 7 where prior to that they will be deemed Production Specialists given they fulfill competencies at Level 6. Master Craftsman for textiles crafts are respective of the type of technique applied to produce the textile craft. This will also include a high level of designing competencies.

iv) Ceramic Craft

The variety of Malaysian craft can be attributed to the availability of its natural resources. Traditional ceramics refers to ceramic products that are produced from unrefined clay and combinations of refined clay and powdered or granulated non-plastic minerals that are found on muddy river banks across all states of Malaysia.

The *Labu Sayong* of Perak (traditional water storage) and Sarawak vases are the most popular ceramic products of Malaysia which is made in unique shapes and covered with traditional ethnical motives and cultural designs.

It can be seen in the Occupational Structure that the Production sub-area is divided into the techniques of producing ceramic craft which are either through slip casting or studio work.



The entry level for the Design area starts at Level 3 as a Design Assistant and then proceeds as Designers at Level 4, Senior Designers at Level 5 and as Design Specialists at Level 6. Those under the Production area will start as Assistant Craftsman at level 2 and may proceed as Craftsman at Level 3. Then they may proceed until Level 4 and 5 as Senior Craftsman and Production Manager respectively whom will manage the production process. Personnel at Level 6, which are the Production Specialists, will be responsible for managing and developing the production process. The highest level of recognition for Craftsman are as the Master Craftsman at Level 7 where prior to that they will be deemed Production Specialists given they fulfill competencies at Level 6. Master Craftsman will require a high level of designing and craft production competencies.

v) Various Crafts

As the previous categories of handicrafts were divided according to the type of raw material, various crafts is the category of handicrafts that are made up of a combination of several types of material (i.e. metal, textile forest based, ceramic) or material that are not in the previous categories. Examples of crafts made up of a combination of several materials are such as the *keris* that comprises of metal and wood and the *wau* that mostly comprises of wood bamboo and paper. *Wau* making requires patience and tremendous skill. Bamboo will be cut and made into the frame or skeleton of the *wau*. Then, designs are traced on a tinted and shiny glazed paper and carefully cut out and pasted on paper which is glued to the bamboo skeleton. There are also *waus* that are made using the batik technique or painted by batik artists and the designs are always more creative and less formalized by tradition.

Examples of crafts made from materials not in the previous categories are such as leather, glass and crystal products, plastic, resin, fish scales, dried plants, ivory and many more unique raw material based on the craftsman creativity. The



technique of using a torch to melt and shape glass rods into beautiful and colourful ornaments or flame workings has caught on with Malaysian artisans. The creativity and skill of the artisans has successfully churned out beautiful and high quality glass crafts using the blowing method including the likes of colourful glass flowers, vases, table lamps, plates, bowls and others.

The list of Various Crafts is endless, therefore it has been agreed with the development and evaluating panel for this OA that the handicrafts for this area are based 'on demand' and the development of future NOSS are based on specific requests from the industry.

4.3 HANDICRAFT SOUVENIR INDUSTRY OCCUPATIONAL AREA ANALYSIS

The Occupational Area Analysis is done so that the current job titles in the industry are translated into the job scope required of the personnel. In doing so, candidates will have better employment prospects as there will be no mismatch of job titles to expected job competencies. This is because different organisations use different job titles. Certification will also be able to reflect the job competencies correctly and avoid confusion of job scope based on job titles.

It can be seen that for each of the Occupational Structures, an Occupational Area Structure is defined. In the Occupational Area Analysis for the Design personnel it has been identified that the entry level begins at Level 3 where they will start by preparing the design drawings where the job area is specified as Design Visualisation, then at Level 4 the personnel will be responsible for Design Sketching And Specification. At Level 5 the personnel will be in charge of Design Development, where finally at Level 6 they will be responsible for Design Conceptualisation.

Under the Production area of work, the personnel will start at Level 2 and will be responsible for Production Support, then at level 3 will be responsible for the



Production Operation. At level 4 they will be able to carry out production supervision. At level 5 these personnel will be able to liaise with R & D teams in order to carry out production management & development and at Level 6 they may be able to carry out specialised production. Certain craft sub-sector merges its sub areas as the job scopes are similar and the different techniques can be trained in the same NOSS program as required. As the term Master Craftsman or *Tokoh kraf/Adiguru* is known as the most skilled craftsman of their trade in Malaysia, those at Level 7 will be responsible for specialised craft design and production.



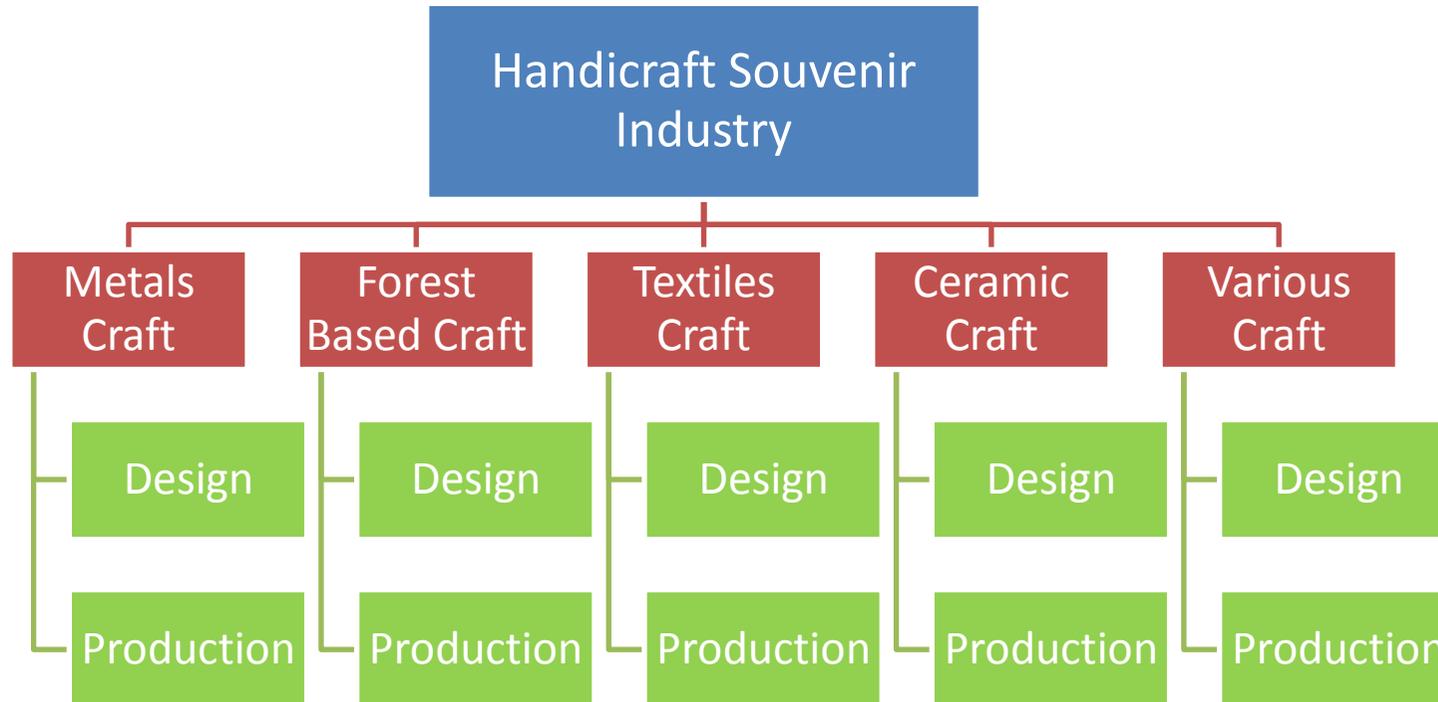


Figure 4.1: Handicraft Souvenir Industry



Table 4.1: Occupational Structure for the Handicraft Souvenir Industry – Metal Craft Sub Sector

Sector	Handicraft Souvenir Industry								
Sub-sector	Metal Craft								
Area	Metal Craft Design	Metal Craft Production							
Sub-area / Level		Jewellery				Wares			
		Gold	Silver	Copper	Brass	Gold	Silver	Copper	Brass
L8	No Level	No Level				No Level			
L7	Metal Craft Master Craftsman								
L6	Metal Craft Design Specialist	** Metal Craft Jewellery Production Specialist				** Metal Craft Wares Production Specialist			
L5	Metal Craft Senior Designer	** Metal Craft Jewellery Production Manager				** Metal Craft Wares Production Manager			
L4	Metal Craft Designer	* Metal Craft Jewellery Senior Craftsman				* Metal Craft Wares Senior Craftsman			
L3	Metal Craft Assistant Designer	* Metal Craft Jewellery Craftsman				* Metal Craft Wares Craftsman			
L2	No Level	** Metal Craft Jewellery Assistant Craftsman				** Metal Craft Wares Assistant Craftsman			
L1	No Level	No Level				No Level			

*Critical Job Title In Short Term

**Critical Job Title In Mid Term



Table 4.1: Occupational Structure for the Handicraft Souvenir Industry – Metal Craft Sub Sector (Continued)

Sector	Handicraft Souvenir Industry		
Sub-sector	Metal Craft		
Area	Metal Craft Design	Metal Craft Production	
Sub-area / Level		Pewter	
		Jewellery	Wares
L8	No Level	No Level	No Level
L7	Metal Craft Master Craftsman		
L6	Metal Craft Design Specialist	** Pewter Jewellery Production Specialist	** Pewter Wares Production Specialist
L5	Metal Craft Senior Designer	** Pewter Jewellery Production Manager	** Pewter Wares Production Manager
L4	Metal Craft Designer	* Pewter Jewellery Senior Craftsman	* Pewter Wares Senior Craftsman
L3	Metal Craft Assistant Designer	* Pewter Jewellery Craftsman	* Pewter Wares Craftsman
L2	No Level	** Pewter Jewellery Assistant Craftsmen	** Pewter Wares Assistant Craftsman
L1	No Level	No Level	No Level

*Critical Job Title in Short Term

**Critical Job Title in Mid Term



Table 4.2: Occupational Area Structure of Handicraft Souvenir Industry – Metal Craft Sub sector

Sector	Handicraft Souvenir Industry								
Sub-sector	Metal Craft								
Area	Metal Craft Design	Metal Craft Production							
Sub-area / Level		Jewellery				Wares			
		Gold	Silver	Copper	Brass	Gold	Silver	Copper	Brass
L8	No Level	No Level				No Level			
L7	Metal Craft Specialised Craft Design & Production								
L6	Metal Craft Design Conceptualization	Metal Craft Jewellery Specialised Production				Metal Craft Wares Specialised Production			
L5	Metal Craft Design Development	Metal Craft Jewellery Production Management & Development				Metal Craft Wares Production Management & Development			
L4	Metal Craft Design Sketching And Specification	Metal Craft Jewellery Production Supervision				Metal Craft Wares Production Supervision			
L3	Metal Craft Design Visualization	Metal Craft Jewellery Production				Metal Craft Wares Production			
L2	No Level	Metal Craft Jewellery Production Support				Metal Craft Wares Production Support			
L1	No Level	No Level				No Level			



Table 4.2 : Occupational Area Structure of Handicraft Souvenir Industry – Metal Craft Sub sector (continued)

Sector	Handicraft Souvenir Industry		
Sub-sector	Metal Craft		
Area	Handicraft Souvenir Design	Handicraft Souvenir Production	
Sub-area / Level		Jewellery	Wares
		Pewter	
L8	No Level	No Level	No Level
L7	Pewter Specialised Craft Design & Production		
L6	Metal Craft Design Conceptualization	Pewter Jewellery Specialised Production	Pewter Wares Specialised Production
L5	Metal Craft Design Development	Pewter Jewellery Production Management & Development	Pewter Wares Production Management & Development
L4	Metal Craft Design Sketching And Specification	Pewter Jewellery Production Supervision	Pewter Wares Production Supervision
L3	Metal Craft Design Visualization	Pewter Jewellery Production	Pewter Wares Production
L2	No Level	Pewter Jewellery Production Support	Pewter Wares Production Support
L1	No Level	No Level	No Level



Table 4.3 : Occupational Structure of Handicraft Souvenir Industry – Forest Based Craft Sub sector

Sector	Handicraft Souvenir Industry		
Sub-sector	Forest Based Craft		
Area	Forest Based Craft Design	Forest Based Craft Production	
Sub-area / Level		Rattan	Bamboo
L8	No Level	No Level	
L7	Forest Based Craft Master Craftsman		
L6	Forest Based Craft Design Specialist	** Forest Based Craft Production Specialist	
L5	Forest Based Craft Senior Designer	** Forest Based Craft Production Manager	
L4	Forest Based Craft Designer	* Forest Based Craft Senior Craftsman	
L3	Forest Based Craft Assistant Designer	* Forest Based Craft Craftsman	
L2	No Level	* Forest Based Craft Assistant Craftsman	
L1	No Level	No Level	

*Critical Job Title in Short Term

**Critical Job Title in Mid Term



Table 4.3 : Occupational Structure of Handicraft Souvenir Industry – Forest Based Craft Sub sector (Continued)

Sector	Handicraft Souvenir Industry	
Sub-sector	Forest based Craft	
Area	Forest Based Craft Design	Forest Based Craft Production
Sub-area / Level		Wood
L8	No Level	
L7	Wood Craft Master Craftsman	
L6	Forest Based Design Specialist	** Wood Craft Production Specialist
L5	Forest Based Senior Designer	** Wood Craft Production Manager
L4	Forest Based Designer	* Wood Craft Senior Craftsman
L3	Forest Based Assistant Designer	* Wood Craft Craftsman
L2	No Level	* Wood Craft Assistant Craftsman
L1	No Level	

*Critical Job Title in Short Term

**Critical Job Title in Medium Term



Table 4.4 : Occupational Area Structure of Handicraft Souvenir Industry – Forest Based Craft Sub sector

Sector	Handicraft Souvenir Industry		
Sub-sector	Forest based Craft		
Area	Forest based Craft Design	Forest based Craft Production	
Sub-area / Level		Rattan	Bamboo
L8	No Level	No Level	
L7	Forest based Craft Specialised Craft Design & Production		
L6	Forest based Craft Design Conceptualization	Forest based Craft Specialised Production	
L5	Forest based Craft Design Development	Forest based Craft Production Management & Development	
L4	Forest based Craft Design Sketching And Specification	Forest based Craft Production Supervision	
L3	Forest based Craft Design Visualization	Forest based Craft Production	
L2	No Level	Forest based Craft Production Support	
L1	No Level	No Level	



Table 4.4 : Occupational Area Structure of Handicraft Souvenir Industry – Forest Based Craft Sub sector (Continued)

Sector	Handicraft Souvenir Industry	
Sub-sector	Forest based Craft	
Area	Forest based Craft Design	Forest based Craft Production
Sub-area / Level		Wood
L8	No Level	No Level
L7	Forest based Craft Design & Production	
L6	Forest Based Design Conceptualization	Wood Craft Specialised Production
L5	Forest Based Design Development	Wood Craft Production Management & Development
L4	Forest Based Design Sketching And Specification	Wood Craft Production Supervision
L3	Forest Based Design Visualization	Wood Craft Production
L2	No Level	Wood Craft Production Support
L1	No Level	No Level



Table 4.5 : Occupational Structure of Handicraft Souvenir Industry – Ceramic Craft Sub sector

Sector	Handicraft Souvenir Industry		
Sub-sector	Ceramic Craft		
Area	Ceramic Craft Design	Ceramic Craft Production	
Sub-area / Level		Slip Casting	Studio Work
L8	No Level		
L7	Ceramic Craft Master Craftsman		
L6	Ceramic Craft Design Specialist	** Slip Casting Production Specialist	** Studio Work Production Specialist
L5	Ceramic Craft Senior Designer	** Slip Casting Production Manager	** Studio Work Production Manager
L4	Ceramic Craft Designer	* Slip Casting Senior Craftsman	*Studio Work Senior Craftsman
L3	Ceramic Craft Assistant Designer	* Slip Casting Craftsman	* Studio Work Craftsman
L2	No Level	* Slip Casting Assistant Craftsman	* Studio Work Assistant Craftsman
L1	No Level		

*Critical Job Title in Short Term

**Critical Job Title in Mid Term



Table 4.6 : Occupational Area Structure of Handicraft Souvenir Industry – Ceramic Craft Sub sector

Sector	Handicraft Souvenir Industry		
Sub-sector	Ceramic Craft		
Area	Ceramic Craft Design	Ceramic Craft Production	
Sub-area / Level		Slip Casting	Studio Work
L8	No Level		
L7	Ceramic Craft Specialised Craft Design & Production		
L6	Ceramic Craft Design Conceptualization	Ceramic Craft Specialised Production	
L5	Ceramic Craft Design Development	Ceramic Craft Production Management & Development	
L4	Ceramic Craft Design Sketching And Specification	Ceramic Craft Production Supervision	
L3	Ceramic Craft Design Visualization	Ceramic Craft Production	
L2	No Level	Ceramic Craft Production Support	
L1	No Level		



Table 4.7 : Occupational Structure of Handicraft Souvenir Industry – Textile Craft Sub sector

Sector	Handicraft Souvenir Industry								
Sub-sector	Textile Craft								
Area	Textile Craft Production								
Sub-area / Level	Textile Craft Design	Batik			Weaving				Embroidery
		Block	Canting	Silk Screen	Songket	Daster	Pua	Tapestry	
L8		No Level			No Level	No Level	No Level	No Level	No Level
L7	Textile Craft Master Craftsman	Batik Master Craftsman			Songket Master Craftsman	Daster Master Craftsman	Pua Master Craftsman	Tapestry Craftsman	Embroidery Master Craftsman
L6	Textile Craft Specialist	**Batik Block Production Specialist	** Batik Canting Production Specialist	** Silk Screen Production Specialist	** Songket Production Specialist	**Daster Production Specialist	**Pua Production Specialist	** Tapestry Production Specialist	** Embroidery Production Specialist
L5	Textile Craft Designer	** Batik Block Production Manager	** Batik Canting Production Manager	** Silk Screen Production Manager	** Songket Production Manager	**Daster Production Manager	**Pua Production Manager	** Tapestry Production Manager	** Embroidery Production Manager
L4	Textile Craft Designer	*Senior Batik Block Maker	* Batik Canting Senior Weaver	* Silk Screen Senior Weaver	* Songket Senior Weaver	*Daster Senior Weaver	*Pua Senior Weaver	* Tapestry Senior Weaver	* Senior Embroiderer
L3	Textile Craft Designer	* Batik Block Maker	* Batik Canting Weaver	* Silk Screen Weaver	* Songket Weaver	*Daster Weaver	*Pua Weaver	* Tapestry Weaver	* Embroiderer
L2	No Level	*Assistant Batik Block Maker	* Batik Canting Assistant Weaver	* Silk Screen Assistant Weaver	* Songket Assistant Weaver	*Daster Assistant Weaver	*Pua Assistant Weaver	* Tapestry Assistant Weaver	*Assistant Embroiderer
L1	No Level	No Level			No Level	No Level	No Level	No Level	No Level



Table 4.8 : Occupational Area Structure of Handicraft Souvenir Industry – Textile Craft Sub sector

Handicraft Souvenir Industry									
Sub-sector	Textile Craft								
Area	Design	Production							
Sub-area / Level		Batik			Weaving			Embroidery	
		Block	Canting	Silk Screen	Songket	Daster	Pua		Tapestry
L8		No Level			No Level	No Level	No Level	No Level	
L7	Textile Craft Specialised Craft Design & Production	Batik Specialised Craft Design & Production			Weaving Specialised Craft Design & Production			Embroidery Specialised Craft Design & Production	
L6	Textile Craft Design Development	Batik Specialised Production			Weaving Specialised Production			Embroidery Specialised Production	
L5	Textile Craft Design Sketching And Specification	Batik Production Management & Development			Weaving Production Management & Development			Embroidery Management & Development	
L4	Textile Craft Design Visualization	Batik Production Supervision			Songket Production Supervision	Daster Production Supervision	Pua Production Supervision	Tapestry Production Supervision	Embroidery Production Supervision
L3	Textile Craft Design Development	Batik Production Operation			Songket Production Operation	Daster Production Operation	Pua Production Operation	Tapestry Production Operation	Embroidery Production Operation
L2	No Level	Batik Production Support			Production Support	Daster Production Support	Pua Production Support	Tapestry Production Support	Embroidery Production Support
L1	No Level	No Level			No Level	No Level	No Level	No Level	No Level

*Critical Job Title in Short Term

**Critical Job Title in Mid Term



Table 4.9 :Occupational Structure of Handicraft Souvenir Industry –Various Craft Sub sector

Sector	Handicraft Souvenir Industry	
Sub-sector	Various Craft	
Area	Design	Production
L8	No Level	No Level
L7	Master Craftsman	
L6	Design Specialist	**Various Craft Production Specialist
L5	Senior Designer	** Various Craft Production Manager
L4	Designer	* Various Craft Senior Craftsman
L3	Assistant Designer	* Various Craft Craftsman
L2	Design Specialist	* Various Craft Assistant Craftsman
L1	No Level	No Level

*Critical Job Title in Short Term

**Critical Job Title in Mid Term



Table 4.10 :Occupational Area Structure of Handicraft Souvenir Industry –Various Craft Sub sector

Sector	Handicraft Souvenir Industry	
Sub-sector	Various Craft	
Area	Design	Production
L8	No Level	No Level
L7	Various Craft Specialised Craft Design & Production	
L6	Design Development	Various Craft Specialised Production
L5	Design Sketching And Specification	Various Craft Production Management & Development
L4	Design Visualization	Various Craft Production Supervision
L3	Design Development	Various Craft Production Operation
L2	No Level	Various Craft Production Support
L1	No Level	No Level



4.4 CRITICAL JOB TITLES - SKILLED PERSONNEL DEMAND IN THE HANDICRAFT SOUVENIR INDUSTRY

This section will highlight the critical job titles which are projected to be skilled personnel requirement in the Handicraft Souvenir industry. Job titles under this category reflect the immediate industry requirement for skilled workers. The identification of critical job titles is the essence of developing the Occupational Standard for the job so that formal training can be carried out and skilled workers can be produced and supplied to the industry. It must be highlighted that other job titles not considered as critical was because the current number of personnel under these categories was sufficient.

Findings for this section were obtained via qualitative analysis during discussions. These occupations will be adapted to the Skills and Vocational training system, and in turn will require the relevant National Occupational Skills Standard (NOSS) to be developed. Critical job titles are defined based on the following scenarios in order of importance:

- i. Shortages of skilled workers supply in the industry
- ii. Shortages of workers for a particular job area in the industry
- iii. Strategic assessment in terms of direction for both short term and long term periods

It has been highlighted that the critical job titles are mainly under the Production area at Level 3 until Level 4 which comprises the Craftsman and Senior Craftsman for the respective type of crafts. Based on panel input these occupations are seen as critical in the short term as there is still insufficient skilled craftsman. However the craftsman at higher levels which are Level 4 and Level 5 are also in demand however only in an estimated 3 to 5 years.



Table 4.11 includes the list of Critical Job titles and Table 4.12 shows the summary of critical job titles for reference.

Table 4.11: List of Critical Job Titles

Item	Critical Job Titles	Short Term (1-3 Years) (√)	Medium Term (4-5 Years) (√)
Sub-Sector: Metal Craft			
1	Metal Craft Jewellery Production Specialist Level 6		√
2	Metal Craft Wares Production Specialist Level 6		√
3	Metal Craft Jewellery Production Manager Level 5		√
4	Metal Craft Wares Production Manager Level 5		√
5	Metal Craft Jewellery Senior Craftsman Level 4	√	
6	Metal Craft Wares Senior Craftsman Level 4	√	
7	Metal Craft Jewellery Craftsman Level 3	√	
8	Metal Craft Wares Craftsman Level 3	√	
9	Metal Craft Jewellery Assistant Craftsman Level 2		√
10	Metal Craft Wares Assistant Craftsman Level 2		√
11	Pewter Jewellery Production Specialist Level 6		√
12	Pewter Wares Production Specialist Level 6		√
13	Pewter Jewellery Production Manager Level 5		√
14	Pewter Wares Production Manager Level 5		√
15	Pewter Jewellery Senior Craftsman Level 4	√	
16	Pewter Wares Senior Craftsman Level 4	√	



17	Pewter Jewellery Craftsman Level 3	√	
18	Pewter Wares Craftsman Level 3	√	
19	Pewter Jewellery Assistant Craftsmen Level 2		√
20	Pewter Wares Assistant Craftsman Level 2		√
Sub-sector: Forest Based Craft			
21	Forest Based Craft Production Specialist Level 6		√
22	Forest Based Craft Production Manager Level 5		√
23	Forest Based Craft Senior Craftsman Level 4	√	
24	Forest Based Craft Craftsman Level 3	√	
25	Forest Based Craft Assistant Craftsman Level 2	√	
26	Wood Craft Production Specialist Level 6		√
27	Wood Craft Production Manager Level 5		√
28	Wood Craft Senior Craftsman Level 4	√	
29	Wood Craft Craftsman Level 3	√	
30	Wood Craft Assistant Craftsman Level 2	√	
Sub-sector: Ceramic Craft			
31	Slip Casting Production Specialist Level 6		√
32	Slip Casting Production Manager Level 5		√
33	Slip Casting Senior Craftsman Level 4	√	
34	Slip Casting Craftsman Level 3	√	
35	Slip Casting Assistant Craftsman Level 2	√	
36	Studio Work Production Specialist Level 6		√
37	Studio Work Production Manager Level 5		√
38	Studio Work Senior Craftsman Level 4	√	
39	Studio Work Craftsman Level 3	√	
40	Studio Work Assistant Craftsman Level 2	√	
Sub Sector: Textile Craft			
41	Batik Block Production Specialist Level 6		√
42	Batik Block Production Manager Level 5		√



43	Senior Batik Block Maker Level 4	√	
44	Batik Block Maker Level 3	√	
45	Assistant Batik Block Maker Level 2	√	
46	Batik Canting Production Specialist Level 6		√
47	Batik Canting Production Manager Level 5		√
48	Batik Canting Senior Weaver Level 4	√	
49	Batik Canting Weaver Level 3	√	
50	Batik Canting Assistant Weaver Level 2	√	
51	Silk Screen Production Specialist Level 6		√
52	Silk Screen Production Manager Level 5		√
53	Silk Screen Senior Weaver Level 4	√	
54	Silk Screen Weaver Level 3	√	
55	Silk Screen Assistant Weaver Level 2	√	
56	Songket Master Craftsman Level 6		√
57	Songket Production Specialist Level 5		√
58	Songket Production Manager Level 4	√	
59	Songket Senior Weaver Level 3	√	
60	Songket Weaver Level 2	√	
61	Daster Production Specialist Level 6		√
62	Daster Production Manager Level 5		√
63	Daster Senior Weaver Level 4	√	
64	Daster Weaver Level 3	√	
65	Daster Assistant Weaver Level 2	√	
66	Pua Production Specialist Level 6		√
67	Pua Production Manager Level 5		√
68	Pua Senior Weaver Level 4	√	
69	Pua Weaver Level 3	√	
70	Pua Assistant Weaver Level 2	√	
71	Tapestry Production Specialist Level 6		√
72	Tapestry Production Manager Level 5		√



73	Tapestry Senior Weaver Level 4	√	
74	Tapestry Weaver Level 3	√	
75	Tapestry Assistant Weaver Level 2	√	
76	Embroidery Production Specialist Level 6		√
77	Embroidery Production Manager Level 5		√
78	Senior Embroiderer Level 4	√	
79	Embroiderer Level 3	√	
80	Assistant Embroiderer Level 2	√	
Sub-sector: Various Craft			
81	Various Craft Production Specialist Level 6		√
82	Various Craft Production Manager Level 5		√
83	Various Craft Senior Craftsman Level 4	√	
84	Various Craft Craftsman Level 3	√	
85	Various Craft Assistant Craftsman Level 2	√	



The table below shows the summary of critical job titles.

Table 4.12: Summary of Critical Job Titles

Sector	Sub-Sector	Level								Total Critical Job Titles	Total of Job Titles
		1	2	3	4	5	6	7	8		
Handicraft Souvenir Industry	Metal Craft	0	4	4	4	4	4	0	0	20	30
	Forest Based Craft	0	2	2	2	2	2	0	0	10	20
	Ceramic Craft	0	2	2	2	2	2	0	0	10	15
	Textile Craft	0	8	8	8	8	8	0	0	40	51
	Various Craft	0	1	1	1	1	1	0	0	5	11
Total Critical Job Titles		0	17	17	17	17	17	0	0	85	
Total of Job Titles		0	16	22	22	22	22	11	0		127

Therefore, it can be seen that there are a total of 85 critical job titles in the Handicraft Souvenir Industry.

4.5 RELEVANT JOB AREAS SUPPORTING THE HANDICRAFT SOUVENIR INDUSTRY

Relevant job areas that support the Handicraft Souvenir Industry but are part of other Industry's Occupational Structures were also identified in this analysis. The industries were Research & Development and Sales & Marketing. These job areas are elaborated as below.

i) Research and Development

This job area correlates with the Handicraft Souvenir Industry at the Production Management and Development level. Research and Development personnel will



assist the personnel at Level 6 of the production job area under the Handicraft Souvenir Industry to research the latest and suitable methods of production in terms of material used, production mould design and manufacturing processes in order to facilitate the production process. By implementing the latest trends and technology in material usage and manufacturing processes, the production management and development personnel (Production Specialists) will be able to produce handicraft products with better quality and more quantity.

Area	Production		Area/ Level	Handicraft Production
Sub Area/ Level	Research & Development	Process Engineering		
Level 7	Principal Researcher	Principal Process Engineer	Level 7	Master Craftsman
Level 6	Senior Researcher	Senior Process Engineer	Level 6	Production Specialist
Level 5	Researcher	Process Engineer	Level 5	Production Manager
Level 4	Assistant Researcher	Assistant Process Engineer	Level 4	Senior Craftsman
Level 3	No Level	No Level	Level 3	Craftsman
Level 2	No Level	No Level	Level 2	Assistant Craftsman
Level 1	No Level	No Level	Level 1	No Level

Figure 4.2: Research & Development and Handicraft Production Personnel

ii) Sales & Marketing

The sales & marketing job area is very important to the Handicraft Souvenir Industry as personnel under this job area will assist in the promotion and sales of the handicraft products not only locally but internationally. These Sales & Marketing personnel might be in the same organisation that produces the handicraft or may



also be traders who will buy the handicrafts then sell these to potential customers. Other agencies such as the Malaysian Handicraft Development Cooperation also play a major role and in helping to promote local handicrafts.

The figure below shows the structure and personnel under Sales & Marketing.

Sub Area/ Level	Sales & Marketing		Sub Area/ Level	Handicraft Production
Level 7	No Level		Level 7	Master Craftsman
Level 6	No Level		Level 6	Production Specialist
Level 5	Sales & Marketing Manager	↔	Level 5	Production Manager
Level 4	Sales & Marketing Executive		Level 4	Senior Craftsman
Level 3	Sales & Marketing Assistant Executive		Level 3	Craftsman
Level 2	No Level		Level 2	Assistant Craftsman
Level 1	No Level		Level 1	No Level

Figure 4.3: Sales & Marketing and Handicraft Production Personnel



4.6 SUPPLY AND DEMAND ANALYSIS

In order to further confirm the findings obtained through qualitative techniques to identify the job titles and job areas currently in demand in the Handicraft Souvenir Industry, a supply and demand analysis has been conducted which is based on quantitative techniques.

The data used for the supply and demand analysis comes from two primary sources. Supply-side data comes from the Department of Skills Development for Malaysian Skills Certification data and the departments under the Ministry of Higher Education. This data includes completers of all educational or training programs. Demand-side data comes from the Department of Statistics Malaysia which is mapped to the Malaysian Standard Industry Classification codes (MSIC 2008). The MSIC is based on standard occupational categories to quantify labour in the respective industry sectors. These two sources are statistically reliable quantitative sources of supply and demand information available. However, the standard occupational groups are broader than the job titles as highlighted in the Occupational Structures defined in this analysis for the Handicraft Souvenir Industry and this is taken into account in the interpretation of the findings.

The same situation is also applied when analysing and mapping the educational and training courses related to the Handicraft Industry. For example, not all of the graduates of the Industrial Design course go on to become designers in this particular industry , but together they make up the potential supply of new workers for Handicraft Souvenir design jobs.

Current demand data shows the data of workers entering the industry with relevant qualifications. These workers are analysed based on the criteria of education levels to provide an indicator of the quality of labour for this industry. Quality of labour is an important factor in driving productivity growth. Quality of



labour is measured as a percentage of employment of those with tertiary level education. Based on Malaysian Productivity Report 2012/2013, in terms of the education level of the labour force, only 25.6% of the total employed possessed tertiary level education as compared with South Korea, Japan, USA, Canada and Australia where more than 40% of the labour force possessed tertiary level education. However, the labour market was seen to improve, reflected by an increase in labour force participation rising from 62.6% in 2008 to 65.6% in 2012. This healthy trend was supported by an encouraging decrease of unemployment trend, which fell from 3.3% in 2008 to 3.0% in 2012. At the same time, employment recorded an increase (from 10.7 million employees in 2008 to 12.7 million in 2012).⁴

The findings and statistics obtained and analysed are presented in the graphs in the next section.

⁴ Malaysian Productivity Report 2012/2013. Malaysian Productivity Corporation.
<http://www.mpc.gov.my/publication/APR2013.pdf>



4.6.1 CURRENT SUPPLY (2011 – 2013)

The current supply of graduates between the years 2011 till 2013 working in the fields relevant to the Handicraft Souvenir Industry is depicted in the graphs below. The qualifications observed in this study are from the certificate to degree level. The overall aggregate of qualifications is also analysed.

4.6.1.1 Supply by Aggregate of Qualifications

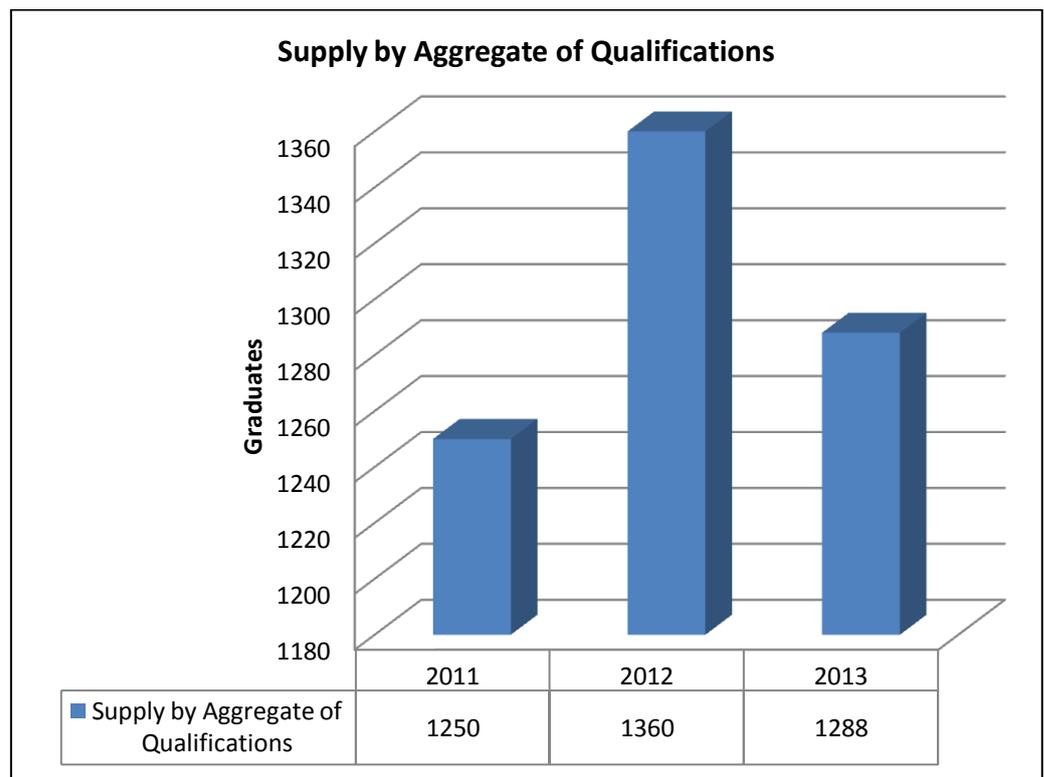


Figure 4.4 : Supply by Aggregate of Qualifications

The above chart shows that the aggregate of qualifications in the year 2012, with 1360 graduates was the highest among the 3 years observed. This is apparent as the year 2012, in line with the Economic Transformation Programme and various Entry Point Projects geared towards a high income nation, many education



institutions stepped up in terms of program delivery and graduate output to accommodate for increased demand for qualified and skilled workforce.⁵

Year 2013, saw a slight decrease in graduates, however, it can be seen that it has not decreased lower than the numbers of graduates in the year 2011, which is the average output of students per year.

4.6.1.2 Supply by Levels of Qualifications

This section breaks down the data above according to the different levels of qualifications, namely Certificate, Diploma and Degree.

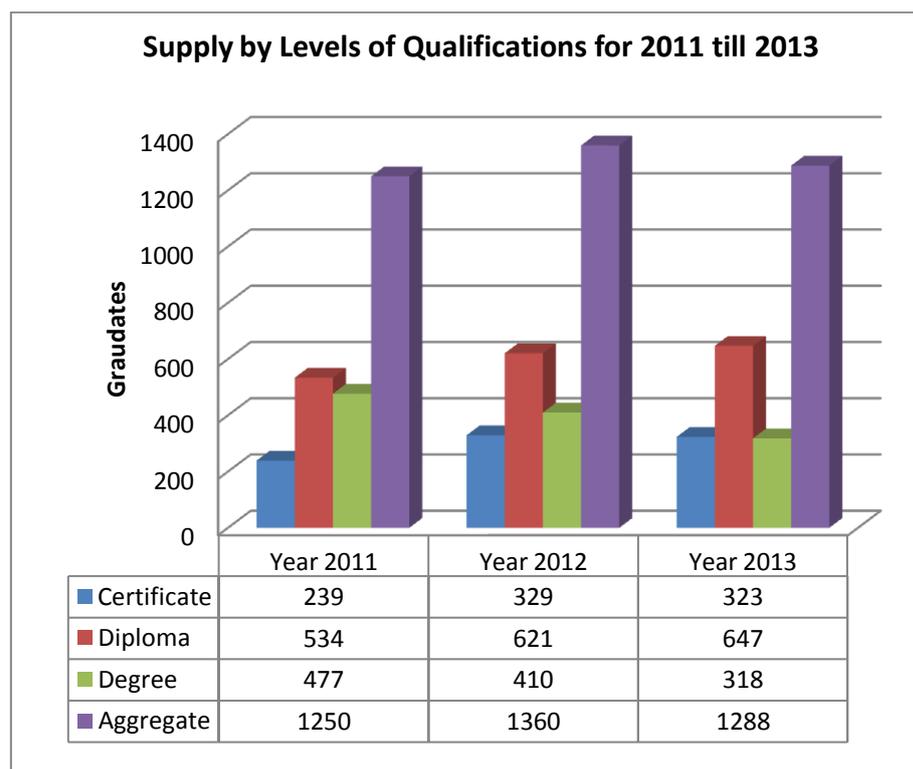


Figure 4.5 : Supply by Levels of Qualifications

⁵Economic Transformation Programme. Annual Report 2012. Prime Minister's Office.
https://www.pmo.gov.my/dokumenattached/Eng_ETP2012_Full.pdf



The above graph shows that the majority of graduates entering the workforce possessed diploma qualifications throughout the 3 years where the highest number of diploma holders was in the year 2013 with as many as 647 graduates. The trend shows that the number of graduates were parallel to the increase of programmes offered at certificate level as a direct impact of the relevant National Occupational Skills Standards (NOSS) developed for the Handicraft Souvenir industry since the year 2008. (Details of NOSS developed in previous years can be referenced in section 2.3 of this report).

However, the majority of those graduating with diploma qualifications is due to the fact that the majority of programmes offered for this industry are at diploma level, such as those offered at the National Craft Institute, Accredited Centres under the DSD and Community Colleges.

The number of degree holders that is lesser than the diploma and certificate holders in the year 2013, is due to a steady decrease in the 3 years prior. The decrease is parallel to that of the increase of certificate and diploma level graduates. This may be caused by students who have opted to continue education only until certificate or diploma level, mostly based on the urgency of going into the workforce sooner, and not based on the notion that most school leavers in the years prior were having poor performance at secondary level education. This is supported by the local scenario in Malaysia where many of those in the Handicraft Souvenir Industry are directly involved in setting up their own enterprises and selling off their own products.



4.6.2 CURRENT DEMAND (2011 – 2013)

Current demand data shows the data of workers entering the industry with relevant qualifications. The number of workers are analysed based on the criteria of education levels, as this may provide an indicator of the quality of labour for this industry. Current demand in the industry is calculated by finding the difference between the workers in the current year and previous year. Calculations resulting in positives show an increase of workers in the industry, where negative results show a decrease of workers either caused by termination or migration to other industries.

4.6.2.1 Demand by Aggregate of Qualifications

Demand is calculated by subtracting the number of workers for the current year from the previous year.

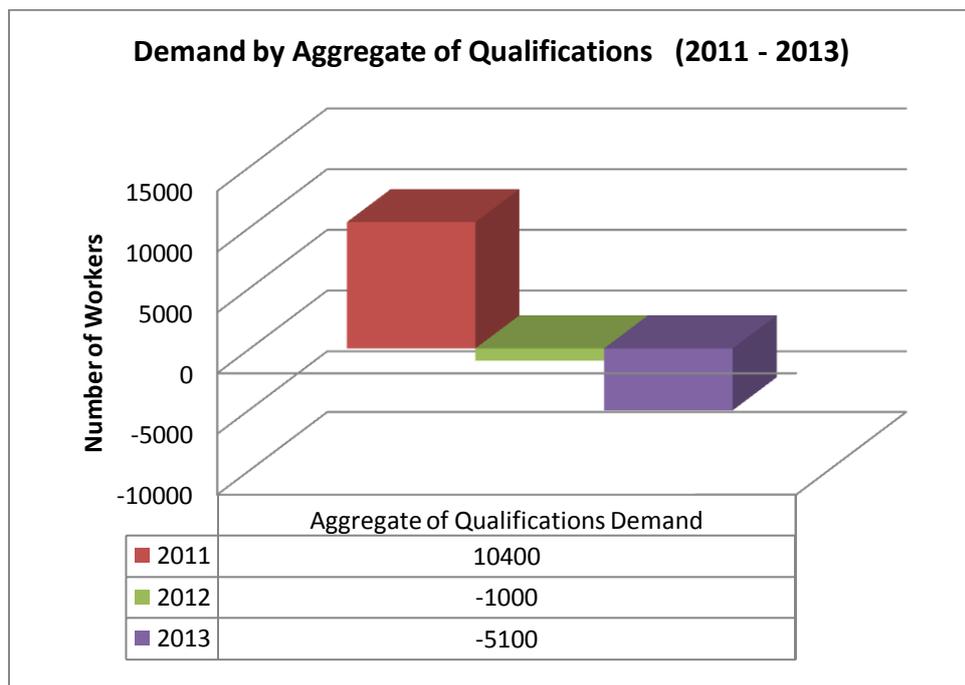


Figure 4.6 : Demand by Aggregate of Qualifications



The graph above shows that the year 2011 saw a high demand of 10400 workers. However, the demand decreased in the year 2012 and further decreased in the year 2013 with -5100 workers. This decrease is caused by two most likely scenarios, either by migration of the workers to other industries or the termination of workers by employers. Further breakdown of the types of qualifications by year can be seen in the following section.

4.6.2.2 Demand by Levels of Qualifications

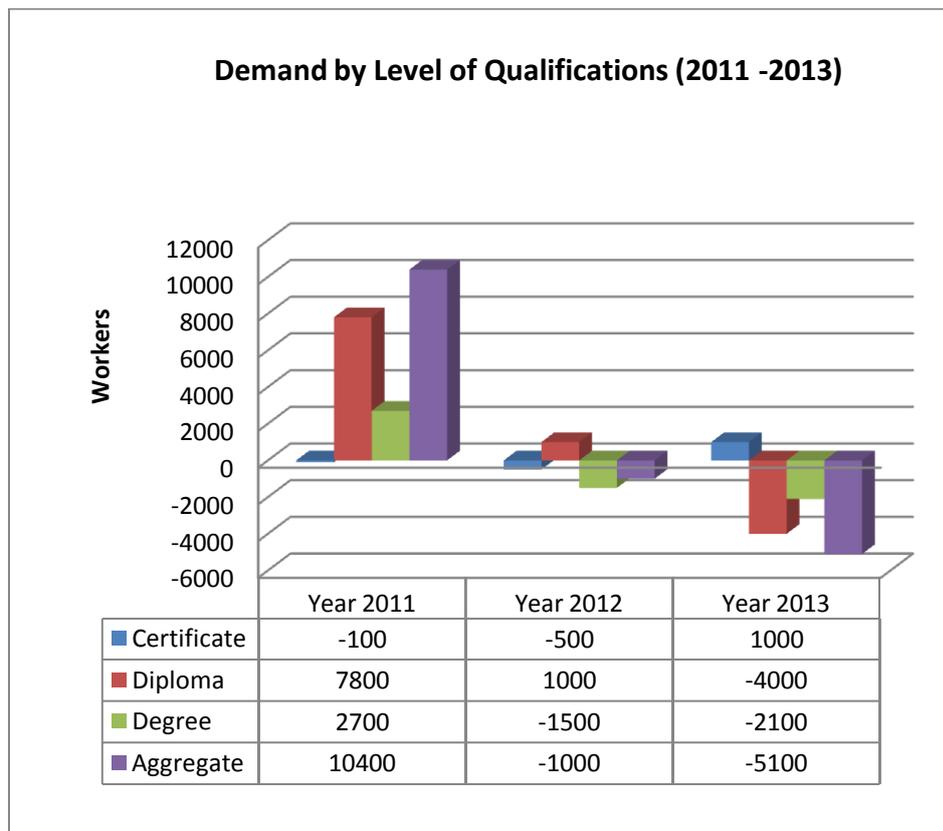


Figure 4.7 : Demand by Levels of Qualifications

The graph above shows the most number of workers with qualifications were 7800 workers with diplomas in the year 2011. However, in the year 2013, there was a sharp decrease of -4000 diploma holders entering the industry. This sharp decrease may have been caused by the high influx of diploma level graduates in the previous year, with 1000 diploma holders coming into the workforce. Therefore, the demand for workers with



diploma qualifications had decreased. The demand for degree holders have decreased since year 2011 at 2700 workers with degrees until -2100 individuals in year 2013. Furthermore, based on input from employers and employees in the industry, most high level graduates demanded higher salaries, whereas in this industry, most workers are required to begin at entry levels due to the nature of work which is skills based when producing the handicrafts. Many experienced craftsman prefer to train new craftsman as apprentices to learn the skills of the trade.

4.6.2.3 Demand of Occupational Structure Sub-Sectors Mapped with MSIC areas

The MSIC classifications data was mapped to the Occupational Structure Sub-sectors as shown in Table 4.12. From that mapping, a demand analysis was done based on these areas, the result from this demand analysis is shown in Figure 4.8. It shows that the highest demand for qualifications in the year 2013 was for the graduates from the metal craft area with 1800 workers in the industry.

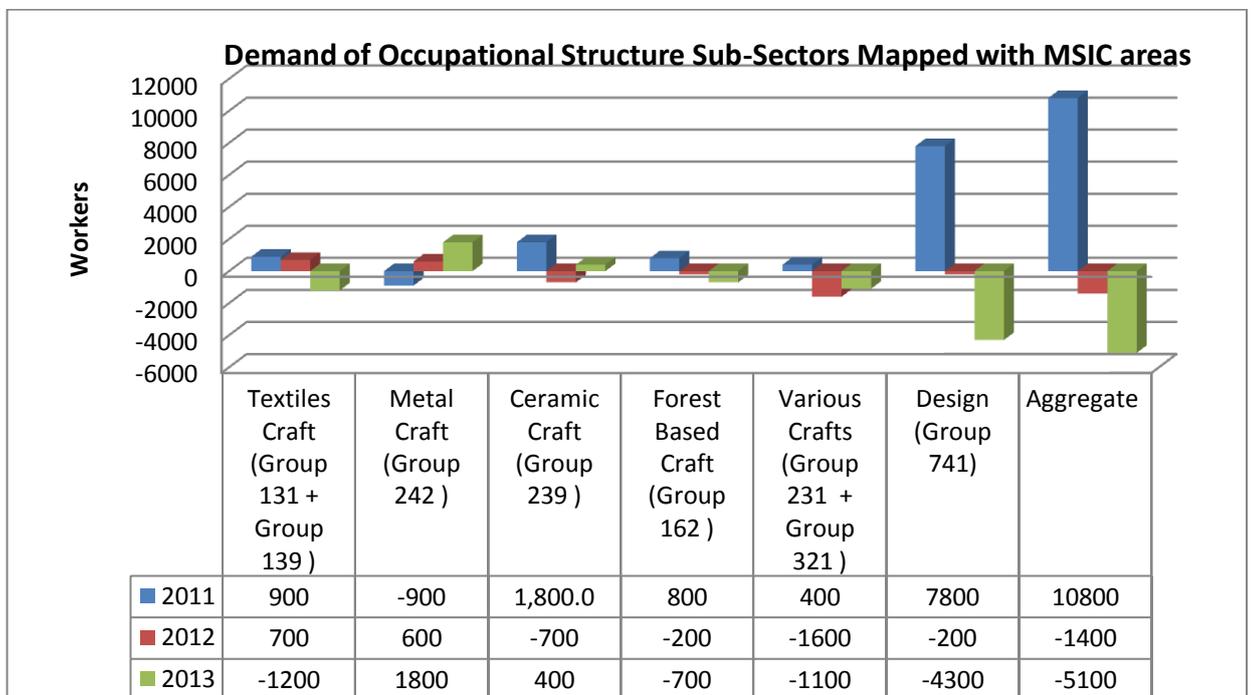


Figure 4.8: Demand by MSIC Areas (2011 -2013)



Table 4.13 shows the mapping done between the occupational structure developed with panel members and the occupational classifications as defined in the Malaysian Standard Industry Classification (MSIC). Through this mapping the statistical data obtained from the Department of Statistics is able to be referred according to the first three digits of the respective occupational classifications.

MSIC Classification Groups	Metal Craft	Forrest based Craft	Textiles Craft	Ceramic	Various Craft
Group 131 : Spinning, weaving and finishing of textiles, Batik making			√		
Group 139 : Manufacture of other textiles			√		
Group 242 Manufacture of basic precious and other non-ferrous metals (silver, gold, platinum)	√				
Group 231 Manufacture of glass and glass products					√
Group 239 Manufacture of non-metallic mineral products (ceramic)				√	
Group 321 : Manufacture of jewellery, bijouterie and related articles, production of worked pearls					√
Group 162 : Manufacture of products of wood, cork, straw and plaiting materials		√			

Table 4.13 : MSIC 2008 Occupational Groups Vs. Handicraft Souvenir Industry Occupational Structure Areas



4.6.3 SUPPLY & DEMAND GAP ANALYSIS

4.6.3.1 Supply & Demand Gap Analysis by Aggregate of Qualifications

Supply and demand gap analysis is calculated by subtracting the demand data from the supply data for a specific year in order to estimate the oversupply or undersupply of individuals.

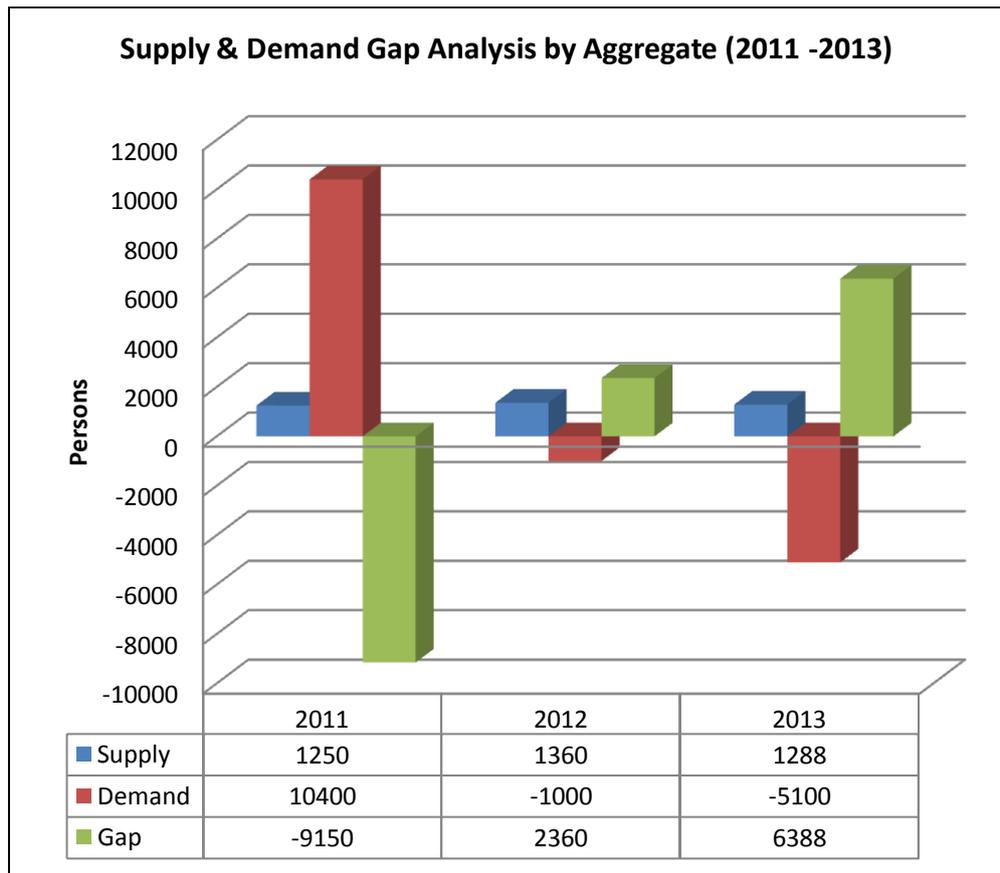


Figure 4.9 : Supply & Demand Gap Analysis by Aggregate (2011 -2013)

The supply and demand gap analysis by aggregate is shown in Figure 4.9. The biggest gap was in the year 2013 with 6388 individuals. This actually shows an oversupply of workers for that year entering the industry with desired qualifications. There has been an increase of the supply and demand gap since 2011, which can be seen as a positive improvement with the supply of graduates filling the demands of the workforce. However, efforts must be



made to avoid an extreme oversupply of graduates by ensuring the courses offered match the needs of the industry.

4.6.3.2 Supply & Demand Gap Analysis by Levels of Qualifications

A supply & demand analysis was done on the three levels of qualifications, which were at certificate level, diploma level and degree level. This analysis is conducted in order to observe the gap obtained by calculating the difference between the supply of qualified graduates and demand for the qualified individuals by levels of qualifications.

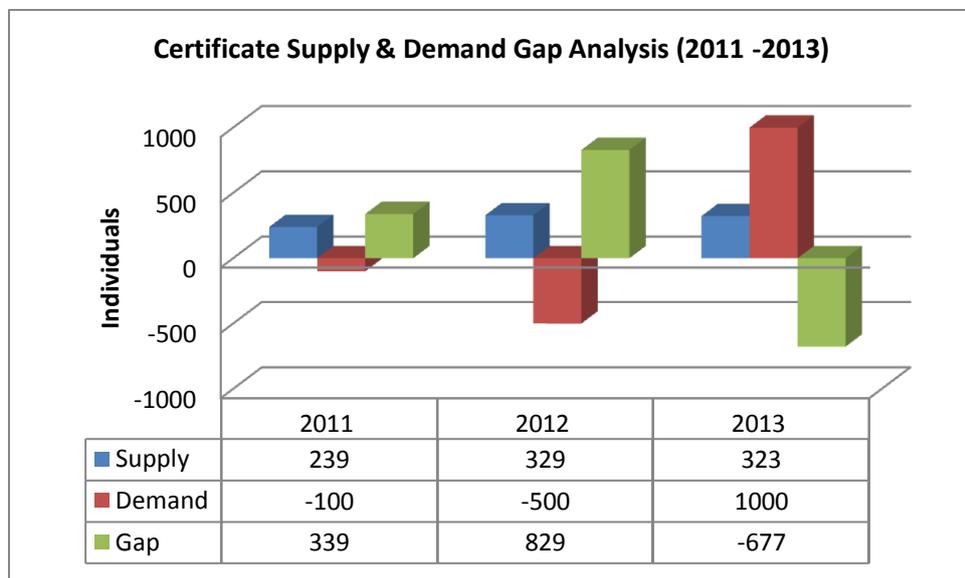


Figure 4.10: Certificate Supply & Demand Gap Analysis (2011 -2013)

Figure 4.10 shows that there was an oversupply of 339 certificate qualified workers in the year 2011, which increased to 829 in the year 2012. The year 2013 saw an increase in demand where this resulted in the gap to be -677. This graph shows that there was a high demand for certificate holders in the industry in the year 2013.



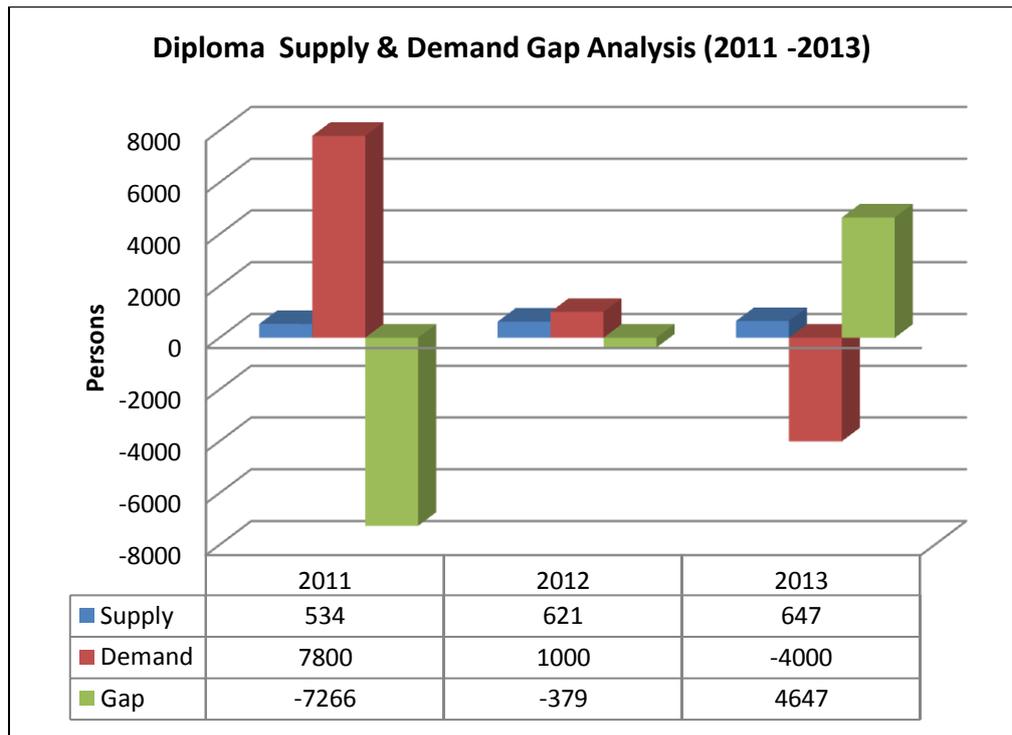


Figure 4.11 :Diploma Supply & Demand Gap Analysis (2011 -2013)

The graph above shows that there was an undersupply of -7266 workers with diploma level qualification in the year 2011, which decreased to negative - 379 in the year 2012 due to the influx of 1000 diploma level worker in the industry. The year 2013 saw a decrease in demand where this resulted in the gap to be an oversupply of 4647 individuals. This may imply that in the year 2013, 4000 workers had left the industry either by termination, migration or by returning to the non working population in order to continue studies until degree level, thus creating an oversupply of 4647 workers trying to secure employment in the industry.



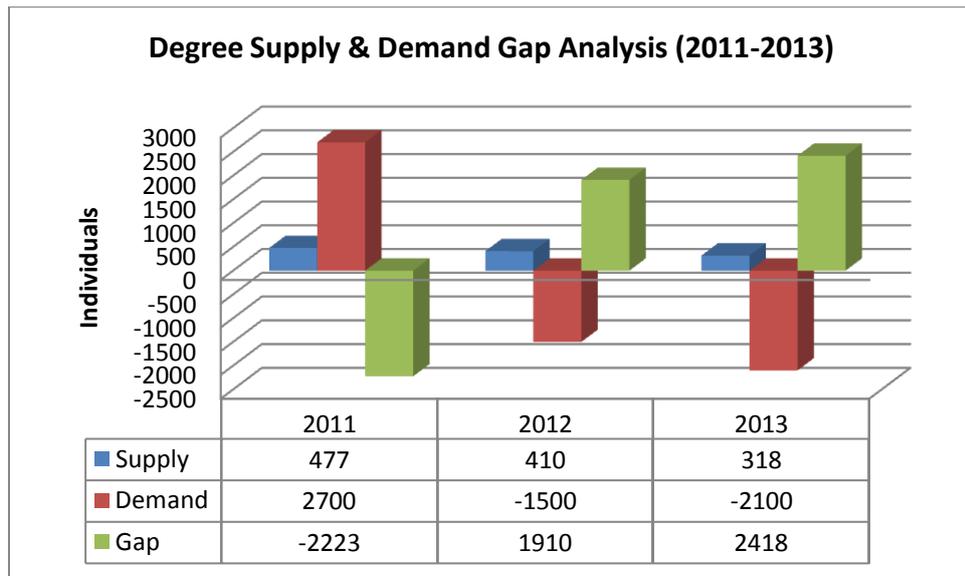


Figure 4.12: Degree Supply & Demand Gap Analysis (2011 -2013)

The graph above shows that there was an undersupply of -2223 degree qualified workers for the year 2011, which increased to an oversupply of 1910 individuals in the year 2012. The year 2013 saw an oversupply of 2418 degree holders entering the industry. However, this oversupply of degree holders may provide insight for training providers into designing the relevant courses that the industry demands at this level such as Design and Production Development.



4.6.4 PROJECTED SUPPLY & DEMAND (2011 – 2020)

The graphs below show the projected supply, demand and supply and demand gap from the year 2011 until 2020.

4.6.4.1 Projected Supply by Aggregate of Qualifications (2011-2020)

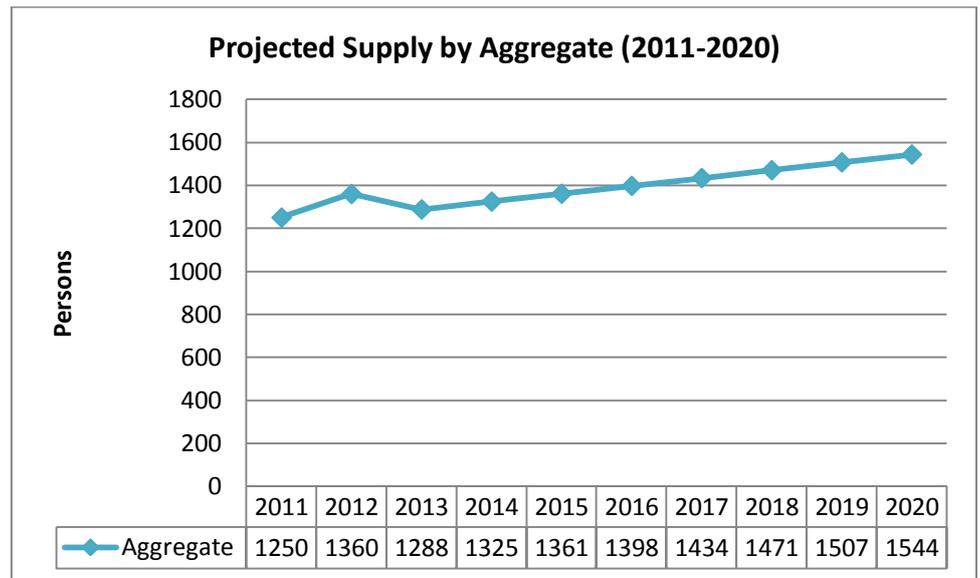


Figure 4.13 :Projected Supply by Aggregate (2011 -2020)

The chart above shows a steady increase of qualified graduates until the year 2020, with an increase from 1250 graduates in year 2011 to 1544 in year 2020. This is a good indicator that future workers in the workforce will be qualified and skillful.



4.6.4.2 Projected Supply by Levels of Qualifications (2011-2020)

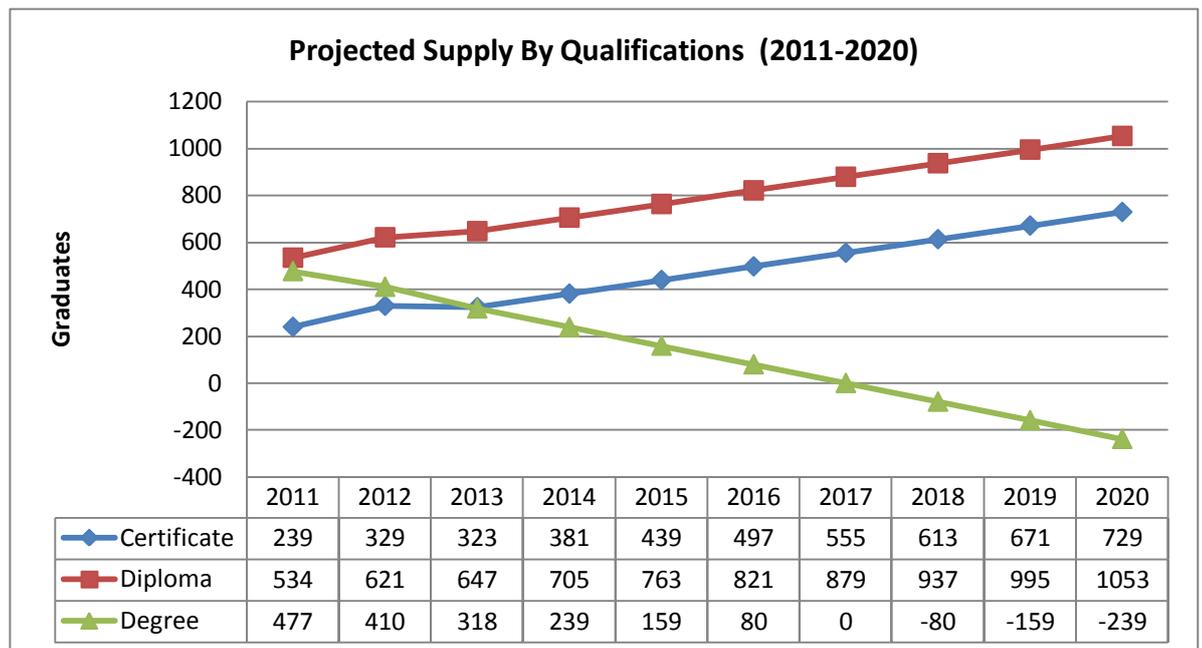


Figure 4.14: Projected Supply by Qualifications (2011 -2020)

The graph above shows that the projected supply of certificate and diploma holders is positive with an increase from 239 certificate holders in year 2011 to 729 graduates in 2020 and an increase of 534 diploma holders in year 2011 to 1053 diploma holders in 2020. However, degree holders will decrease until the year 2020. Therefore there must be a strategy to avoid this issue of decreasing degree holders.

4.6.4.3 Projected Demand by Aggregate of Qualifications (2011-2020)

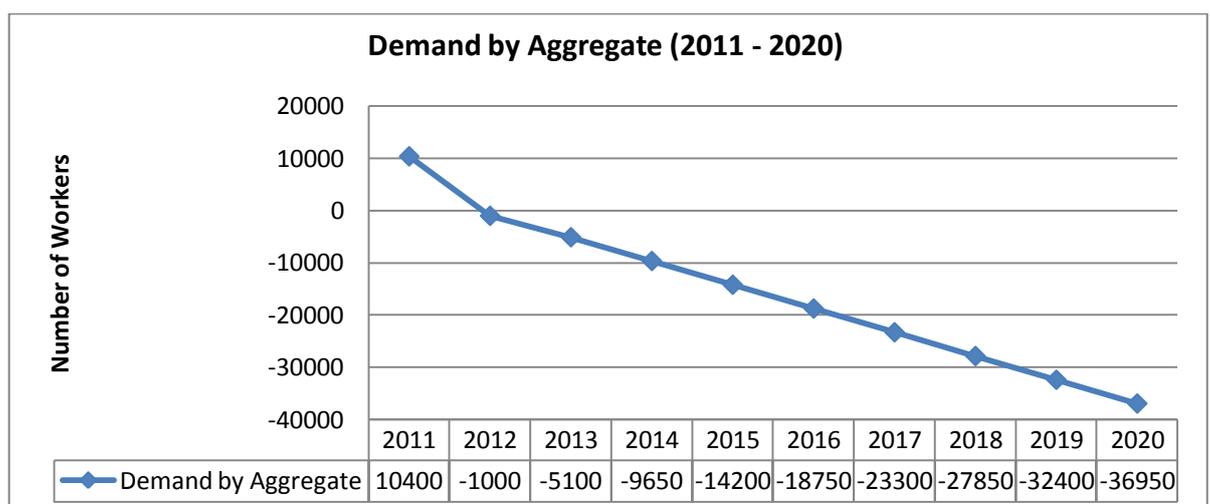


Figure 4.15 : Projected Demand by Aggregate of Qualifications (2011 -2020)



The projected demand analysis shows a decrease of qualified graduates with tertiary education entering the industry. This may show that the industry requires more potential workers with craft skills, however this might be overcome by ensuring that tertiary education for this industry is according to industry demands.

4.6.4.4 Projected Demand by Levels of Qualifications (2011-2020)

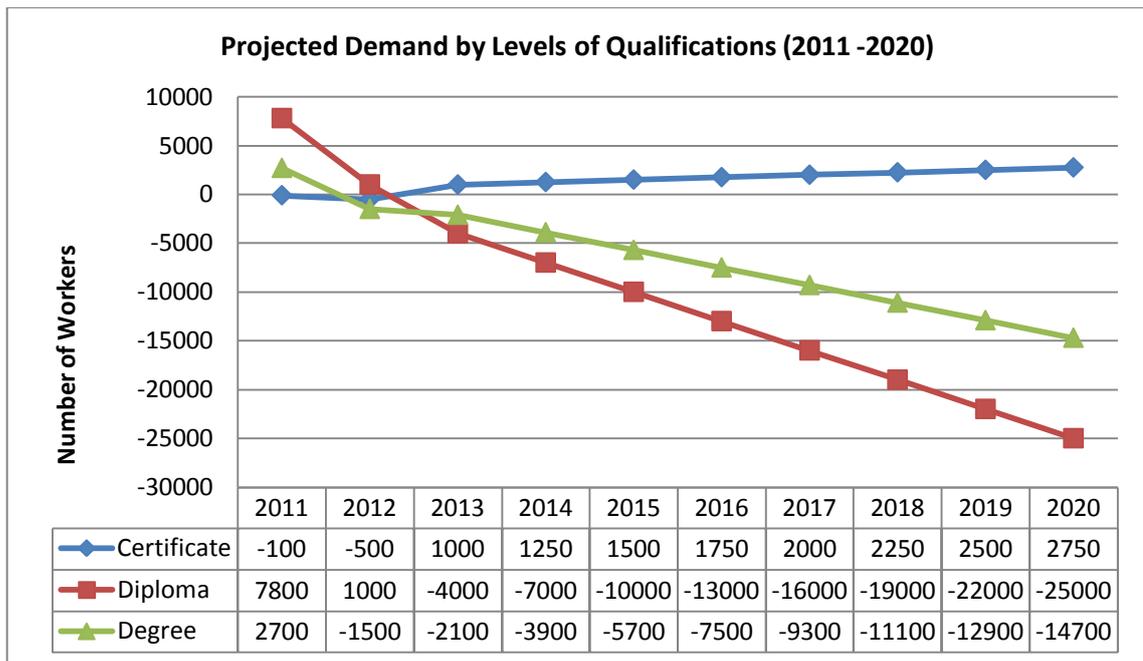


Figure 4.16: Projected Demand by Level of Qualifications (2011 -2020)

The graph above shows the projected demand of the handicraft souvenir industry workers in terms of qualifications. However, there can be seen a decrease of demand for diploma holders until the year 2020, this can be seen as a positive when combined with the increase of diploma graduates, by ensuring that there will not be an oversupply of diploma holders.



4.6.4.5 Projected Supply & Demand by Aggregate of Qualifications (2011-2020)

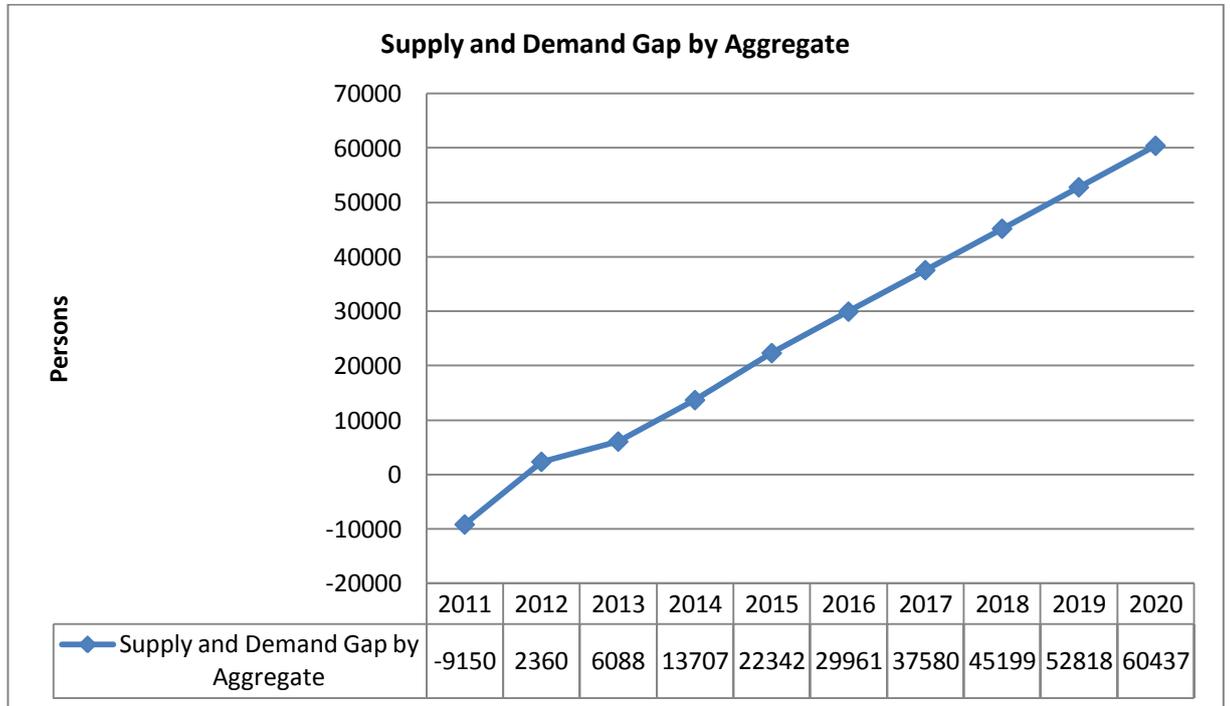


Figure 4.17: Supply and Demand Gap Analysis by Aggregate (2011 -2020)

The graph above shows a steady increase towards year 2020 of qualified workers, ranging from certificate level to degree level. The trend shows that the supply and demand gap will increase through the time span of 6 years.



4.6.4.6 Projected Supply & Demand by Levels of Qualifications (2011-2020)

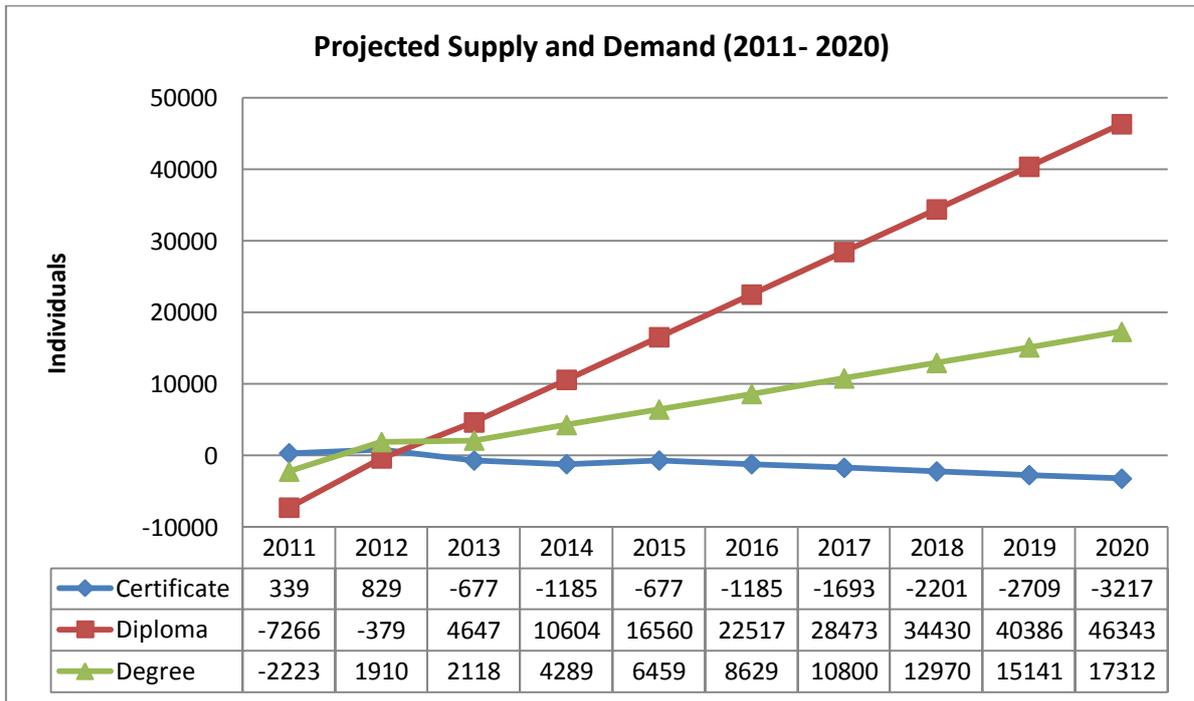


Figure 4.18: Projected Supply and Demand Gap Analysis by Qualifications (2011 -2020)

The graph above shows that there is an oversupply of diploma and degree holders. The certificate gap is more consistent but slowly decreases after 2013 meaning there was an undersupply of certificate holders. This is parallel to the increasing demand in previous graphs showing that certificate holders are in demand and are projected to have an undersupply of certificate level graduates.

4.7 CHAPTER CONCLUSION

Based on this chapter, the sub-sectors that have been identified reflect the main sub-sectors in the Handicraft Souvenir Industry. The visual representations of the Occupational Structures and Occupational Area Structures will enable the industry to be interpreted at a glance in terms of levels of competency and available career paths.



5. CONCLUSION AND RECOMMENDATION

5.1 CHAPTER INTRODUCTION

This chapter will further explain the conclusion obtained based on the synthesis of findings and various output of research. This will be followed by the recommendations as put forth by the researcher based on input throughout the development of this OA.

5.2 CONCLUSION

The conclusion is divided into the earlier objectives of the research as elaborated below:

i. **Objective 1: Occupational Structure and Occupational Area Structure**

Based on the findings obtained throughout the Occupational Analysis on the Handicraft Souvenir Industry, a total of 5 sub sectors, 127 job titles and 85 critical job titles were identified. The occupational structure has been defined by the panel members and further confirmed by comparing with structures in other countries and with the MSIC 2008 occupational classifications.

The findings from the supply and demand analysis further support the findings obtained through the focus groups that high worker demand are for those with certificate level qualifications.

ii. **Objective 2: Supply and Demand Analysis**

Based on the Supply and Demand Analysis by Qualifications for the year 2011 till 2013 which were the analysis of historical data demand analysis, it can be concluded that there was an increased demand for certificate holders in the year 2013, thus causing an undersupply of -677 individuals. The findings from the



supply and demand analysis further support the findings obtained through the focus groups that most of the demand is for certificate level workers in the industry. For the diploma level supply and demand analysis for the year 2011 till 2013, there was an oversupply of 4647 individuals caused by the decrease of demand by -4000 workers who may have left the industry either by termination, migration or by returning to the non working population in order to continue studies until degree level. In terms of degree supply and demand through the years of 2011 till 2013, the figures show there was an undersupply of -2223 individuals with degree level qualification in the year 2011. However, this had increased to 1910 individuals in the year 2012 and in year 2013, there was an oversupply of 2418 individuals. This oversupply of degree level holders entering the industry can be lessened by ensuring that the degree courses are designed to match current industry needs in terms of crafts based skills required to produce quality handicraft products at par with other countries.

The projected Supply & Demand Analysis for the year 2011 till 2020 showed an undersupply of -3217 certificate level graduates in the year 2020, but this does not show that certificate level workers are not required, it actually implies quite the opposite, that there is not enough supply of certificate level workers. However, the projection shows that there will be an oversupply of 46343 diploma holders and 17312 holders in the year 2020. It must be highlighted that this projection is linear therefore the results of extrapolation will be linear based on the last point of reference. Nevertheless, this projection still indicates that the number of diploma and degree of graduates must be in balance with the industry manpower requirements to avoid oversupply which will eventually lead to unemployment.



5.3 RECOMMENDATION

Referring to Malaysia's economic plans and vision for the coming years, a framework of the Handicraft Souvenir industry workforce has been identified. It is hoped that the result of this Occupational Analysis will be able to be used as reference as how to fulfill the future plans of developing skilled personnel and certifying Malaysians in this industry towards improving the quality of the local industry and at boosting Malaysia's global competitiveness.

The gap analysis can be referred to when identifying workforce planning strategies. There are two types of gaps: shortages and surpluses. A shortage occurs when workforce supply falls short of demand (that is, there is an insufficient amount of skills). When workforce surplus exceeds demand, there is a workforce surplus. Once the supply and demand gaps have been identified next is to analyse their 'criticality'. What matters for criticality is the:

- likelihood of the gap occurring
- consequence of the gap occurring.

There are several options when addressing or mitigating workforce gaps. Broad themes might include influencing demand, which may include:

- influencing the internal or external business drivers through policy reform
- changing management practices, information technology systems, business process redesign
- establishing and maintaining partnerships with other agencies or departments, or educational institutions to increase external talent pools and the talent pipeline
- improving the availability of the current workforce
- training existing staff in line with new skill requirements.



Therefore, specific recommendations for the Handicraft Souvenir Industry manpower planning and development are as follows:

1. To streamline the development of the NOSS under the Handicraft Souvenir Industry in line with the findings of this analysis, specifically based on the OS and OAS obtained from this document.
2. Development or review of NOSS for short term demand.
3. Establishment of an Industry Lead Body for the Handicraft Souvenir Industry in general and ensuring membership by all 5 areas (Metal Craft, Forest Based Craft, Textile Craft, Ceramic Craft and Various Craft).
4. Encourage apprenticeship training for handicraft courses. In order to close the gap between industry needs and graduate's skill sets, education and training agencies should strategise in aligning current academic and skills training courses to the demands of the Handicraft Souvenir Industry to avoid an undersupply or oversupply of potential workers. As this industry requires highly skillful workers in order to be credible craftsman, training via apprenticeship methods pose as the most viable and feasible mode of training to ensure that the future workforce are trained according to industry requirements and aspirations.

5.4 CHAPTER CONCLUSION

Based on the conclusion and recommendations highlighted in this chapter, it is hoped that this research has provided information on the current occupational situation of the Handicraft Souvenir Industry in terms of Occupational Structure, Supply & Demand statistics and suggested recommendations to enhance the training of workers for the betterment of the industry in the near future.



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ANNEX 1: MALAYSIAN OCCUPATIONAL SKILLS QUALIFICATION FRAMEWORK (MOSQF) LEVEL DESCRIPTOR



MALAYSIAN OCCUPATIONAL SKILLS QUALIFICATION FRAMEWORK (MOSQF) LEVEL DESCRIPTOR

Level	Level Description
1	Achievement at this level reflects the ability to use relevant knowledge, skills and procedures to complete routine and predictable tasks that include responsibility for completing tasks and procedures subject to direction or guidance
2	Achievement at this level reflects the ability to select and use relevant knowledge, ideas , skills and procedures to complete well-defined tasks and address straightforward problem . It includes taking responsibility for completing tasks and procedures, and exercising autonomy and judgment subject to overall direction or guidance
3	Achievement at this level reflects the ability to identify and use relevant understanding , methods and skills to complete task and address problems that are well defined with a measure of complexity . It includes taking responsibility for initiating and completing tasks and procedures as well as exercising autonomy and judgments within limited parameter . It also reflects awareness of different perspectives or approaches within an sub-area of study or work
4	Achievement at this level reflects the ability to identify and use relevant understanding, methods and skills to address problems that are well defined but complex and non-routine . It includes taking responsibility for overall courses of action as well as exercising autonomy and judgment within fairly broad parameters . It also reflects under-standing of different perspective or approaches within an sub-area of study or work
5	Achievement at this level reflects the ability to identify and use relevant understanding, methods and skills to address broadly-defined, complex problems . It includes taking responsibility for planning and developing courses of action as well as exercising autonomy and judgment within broad parameters. It also reflects understanding of different perspectives, approaches or schools of thought and the reasoning behind them
6	Achievement at this level reflects the ability to refine and use relevant understanding, methods and skills to address complex problems that have limited definition . It includes taking responsibility for planning and developing courses of action that are able to underpin substantial change or development, as well as exercising broad autonomy and judgment . It also reflects an understanding of different perspectives, approaches of schools of thought and the theories that underpin them



Level	Level Description
7	Achievement at this level reflects the ability to reformulate and use relevant understanding, methodologies and approaches to address problematic situations that involve many interacting factors. It includes taking responsibility for planning and developing courses of action that initiate or underpin substantial change or development, as well as exercising broad autonomy and judgment. It also reflects an understanding of theoretical and relevant methodological perspectives, and how they affect their sub-area of study or work
8	Achievement at this level reflects the ability to develop original understanding and extend an sub-area of knowledge or professional practice. It reflects the ability to address problematic situations that involve many complexes, interacting factors through initiating, designing and undertaking research, development or strategic activities. It involves the exercise of broad autonomy, judgement and leadership in sharing responsibility for the development of a field of work or knowledge, or for creating substantial professional or organisational change. It also reflects a critical understanding of relevant theoretical and methodological perspectives and how they affect the field of knowledge or work.



ANNEX 2 : LIST OF DEVELOPMENT PANEL AND FACILITATOR



**LIST OF INDUSTRY PANEL MEMBERS FOR THE HANDICRAFT SOUVENIR INDUSTRY
OCCUPATIONAL ANALYSIS DEVELOPMENT**

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4	EN. YAZID BIN PARLAN	DESIGNER	METAL ART CRAFT/ PEWTER	INSTITUT KRAF NEGARA
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