



**UNIVERSITI PUTRA MALAYSIA**

***ECONOMIC CONTRIBUTION, INNOVATION AND LABOUR CREATION  
IN BATIK INDUSTRY***

**NOOR HASLINA MOHAMAD AKHIR**

**FEP 2017 32**



**ECONOMIC CONTRIBUTION, INNOVATION AND LABOUR CREATION IN  
BATIK INDUSTRY**

By

**NOOR HASLINA MOHAMAD AKHIR**

**Thesis submitted to the School of Graduate Studies, Universiti Putra Malaysia, in  
Fulfilment of the Requirements for the Degree of Doctor of Philosophy**

**July 2017**

## **COPYRIGHT**

All material contained within the thesis, including without limitation text, logos, icons, photographs and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia.



## DEDICATIONS

First, thank to God for His blessings that have passed me to get to this stage of knowledge.

Second, million thanks to my parents (Mohamad Akhir B. Ghazali and Sarifah Bt. Awang), my husband (Rahaimee B. Abd. Rahim) and my daughter (Nurwafa Batrisyia Bt. Rahaimee) on a continuous effort in giving permanent supporting to reach achievements.

Third, million thanks to my supervisor especially my main supervisor, Associate Professor Dr. Normaz Wana B. Ismail, on a strong and gentle soul who taught me to trust in Allah, believe in hard work and also for being my guardian during my study.

Fourth, million thanks to all my friends in Universiti Putra Malaysia and in Universiti Malaysia Terengganu for supporting and encouraging me to believe in myself.

*“ Thank you very much ”*

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

**ECONOMIC CONTRIBUTION, INNOVATION AND LABOUR CREATION IN  
BATIK INDUSTRY**

By

**NOOR HASLINA MOHAMAD AKHIR**

**July 2017**

**Chairman : Associate Professor Normaz Wana Ismail, PhD**  
**Faculty : Economics and Management**

Batik is one of the handicraft products that belongs to the textile-based category. Batik refers to fabric-dyeing method with the resist technique. Starting with small-scale activities, the batik industry has since developed into a successful rural industry, which is also known at the national level. The Malaysian Handicraft Development Corporation acknowledges batik as the primary contributor to the sales of handicraft products in Malaysia. Despite its positive performance in the local market, some batik entrepreneurs are still regarded as microenterprises in terms of small and medium enterprise (SME) business classification. Hence, the firms are expected unable to reach their full potential or can only gain day-to-day income. This then raises a question in regards to the connection between the batik industry and the Malaysian economy. Therefore, the first issue is on measuring the economic contribution of the batik industry to the Malaysian economy. However, due to the limitation of series data related to batik industry performance, the Malaysian Input-Output Table 2010 will be used to measure the variables. Through the industrial linkage model, this study found that batik industry contributes significantly through the backward linkage, indicating a stimulating growth in terms of benefit from the batik industry to the other sectors rather than the batik industry alone. Furthermore, decomposition analysis results show that the first-order effect of injection in the private consumption of batik in final demand contributes to second and higher-order effects in the other sectors of the Malaysian economic structure. This is due to the additional input that is required to satisfy the increase in output demand. This study offers a new finding for the input-output theory related interindustry transactions between batik industry and other production sectors in the Malaysian context.

The second issue highlighted in this study is related to the impact of innovation on batik firm performance. The evolution in the batik industry has led to innovation in the batik-making process, batik products, marketing and organisational methods. However, some batik entrepreneurs follow traditional approach to manage their firm activities. Meanwhile, the third issue addressed in this study is about labour creation in the batik industry. Being a labour-oriented industry, batik entrepreneurs should have enough workers to manage each stage in the batik-making process and save the time, so that the number of production can be increased. However, at present, a majority of employees consist of older folks and contract workers (daily wage). Being a rural industry, batik-making faces intense competition that may hinder its growth. In response to both issues, this study used data acquired from face-to-face survey in Kelantan and Terengganu to analyse the impact of innovation to the performance of batik industry and to determine which firm resources that influence labour creation in the batik industry. There are 62 batik firms in Kelantan and Terengganu that participated in this study. For the second objective, results from the ordinary least square method reveal that only product innovation has significant impact on batik firm performance. This study also offers a more detailed view on the effect of all four types of Schumpeterian innovation on batik firm performance. By using the same method, the third objective produces evidence for resource-based theory on labour creation. Results show that firm age and firm sales greatly influence labour creation in batik industry. The information about contribution, firm performance and labour creation in batik industry is important to help batik entrepreneurs to enhance the economic well-being of local communities in terms of job opportunities and household income. Overall, the batik industry is not only valuable to the development of Malaysian cultural heritage, but it is also an important asset to the country's economic growth in the future, through its contribution as a successful rural industry.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

## **SUMBANGAN EKONOMI, INOVASI DAN PENCIPTAAN BURUH DALAM INDUSTRI BATIK**

Oleh

**NOOR HASLINA MOHAMAD AKHIR**

**Julai 2017**

**Pengerusi : Profesor Madya Normaz Wana Ismail, PhD**  
**Fakulti : Ekonomi dan Pengurusan**

Batik ialah produk kraf tangan yang tergolong dalam kategori tekstil. Batik merujuk kepada proses pencelupan kain dengan menggunakan teknik rintang. Bermula dengan aktiviti kecil-kecilan, industri batik telah berkembang menjadi industri luar bandar yang berjaya dan juga dikenali di peringkat negara. Perbadanan Kemajuan Kraftangan Malaysia telah mengiktiraf batik sebagai penyumbang utama kepada prestasi jualan kraf tempatan. Walaupun mempunyai prestasi positif dalam pasaran tempatan, sebilangan pengusaha batik masih dikategorikan sebagai pengusaha perusahaan mikro dari segi pengkelasan perniagaan perusahaan kecil dan sederhana (PKS). Dalam konteks ini, syarikat tersebut mungkin tidak dapat mencapai potensi penuh atau hanya memperoleh pendapatan harian. Hal ini menimbulkan persoalan berkenaan hubung kait antara industri batik dengan ekonomi Malaysia. Oleh itu, isu pertama adalah untuk mengukur sumbangan ekonomi industri batik kepada ekonomi Malaysia. Bagaimanapun, oleh sebab adanya kekangan data siri bagi prestasi industri batik, Jadual Input-Output Malaysia 2010 akan digunakan untuk mengukur sumbangan ekonomi tersebut. Melalui model kesalinghubungan industri, kajian ini mendapati bahawa industri batik memberi sumbangan yang ketara melalui rangkaian ke belakang, menunjukkan bahawa pertumbuhan dalam pengeluaran industri batik akan memberi manfaat kepada sektor ekonomi yang lain dan bukan sekadar memberi manfaat kepada industri batik sahaja. Seterusnya, hasil analisis penguraian menunjukkan peningkatan penggunaan batik dalam permintaan akhir menyumbang kepada kesan peringkat kedua dan yang seterusnya kepada sektor lain dalam struktur ekonomi Malaysia disebabkan oleh input tambahan yang diperlukan untuk memenuhi peningkatan permintaan output tersebut. Kajian ini menawarkan penemuan baharu bagi teori input-output yang mempunyai kaitan dengan konsep transaksi antara industri, iaitu antara industri batik dengan sektor pengeluaran yang lain dalam konteks di Malaysia.

Isu kedua yang diketengahkan dalam kajian ini adalah berkaitan dengan kesan inovasi kepada prestasi syarikat batik. Evolusi dalam industri batik membawa pelbagai inovasi kepada proses pembuatan batik, produk batik, kaedah pemasaran dan organisasi. Walau bagaimanapun, sebilangan usahawan batik masih mengekalkan pendekatan tradisional dalam pengurusan aktiviti-aktiviti syarikat mereka. Manakala isu ketiga dalam kajian ini adalah berkaitan dengan penciptaan tenaga kerja dalam industri batik. Sebagai industri berorientasikan buruh, pengusaha batik amat memerlukan pekerja yang mencukupi untuk mengendalikan setiap peringkat dalam proses pembuatan batik dan menjimatkan masa bagi meningkatkan jumlah pengeluaran. Walau bagaimanapun, pada masa ini, majoriti pekerja dalam industri ini merupakan pekerja berusia dan bekerja secara kontrak (pekerja harian). Sebagai industri luar bandar, batik menghadapi persaingan sengit yang boleh mengganggu momentum pertumbuhannya. Bagi menghadapi kedua-dua isu ini, kajian ini menggunakan data yang diperolehi dari tinjauan secara bersemuka di Kelantan dan Terengganu untuk menganalisis kesan inovasi kepada prestasi industri batik dan menentukan sumber-sumber syarikat yang mempengaruhi penciptaan tenaga kerja dalam industri batik. Sebanyak 62 syarikat batik di Kelantan dan Terengganu mengambil bahagian dalam kajian ini. Bagi objektif kedua, hasil kajian daripada kaedah kuasa dua terkecil menunjukkan bahawa hanya inovasi produk mempunyai kesan yang ketara terhadap prestasi syarikat batik. Kajian ini juga menawarkan dapatan yang lebih terperinci berkenaan kesan empat jenis inovasi Schumpeterian kepada prestasi syarikat batik. Dengan menggunakan kaedah yang sama, objektif ketiga menghasilkan bukti bagi teori berasaskan sumber terhadap penciptaan tenaga kerja. Keputusan menunjukkan bahawa umur syarikat dan hasil jualan mempunyai pengaruh yang besar terhadap penciptaan tenaga kerja dalam industri batik. Maklumat mengenai sumbangan, prestasi firma dan penciptaan tenaga kerja dalam industri batik sangat penting untuk membantu pengusaha batik meningkatkan kesejahteraan ekonomi masyarakat setempat terutama dari segi peluang pekerjaan dan pendapatan isi rumah. Kesimpulannya, industri batik bukan sahaja bernilai dalam pembangunan warisan budaya Malaysia tetapi juga merupakan aset penting kepada pembangunan ekonomi Malaysia pada masa hadapan melalui sumbangannya sebagai industri luar bandar yang berjaya.



## ACKNOWLEDGEMENTS

*Bismillahirrahmannirahim*

This study was funded through Exploratory Research Grant Scheme (ERGS), Ministry of Education Malaysia under research program entitled Creative Industry in Malaysia: The Exploration of the Contribution and Challenges of Batik Industry through Innovation, Labour Creation and Financial Assistance (ERGS/1-2013/5527139).

I am using this opportunity to express my sincere gratitude to my supervisor Assoc. Prof. Dr. Normaz Wana Ismail for the continuous support of my Ph.D study, for her patience, motivation, and immense knowledge. Her guidance helped me in all the time of writing of this thesis. I could not have imagined having a better supervisor for my Ph.D study.

Besides my main supervisor, I would like to thank the rest of my thesis committee: Assoc. Prof. Dr. Rusmawati Said and Dr. Shivee Ranjane a/p Kaliappan for their insightful comments, motivation and encouragement, and further, for the hard question which gives me an idea to widen my research from various perspectives.

Last but not the least, I would like to thank my loving family: my parents, my husband and my daughter as well as my brother and sister for supporting me spiritually throughout writing this thesis and for my life in general.

I certify that a Thesis Examination Committee has met on 26 July 2017 to conduct the final examination of Noor Haslina binti Mohamad Akhir on her thesis entitled "Economic Contribution, Innovation and Labour Creation in Batik Industry" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

Members of the Thesis Examination Committee were as follows:

**Mohd Shahwahid bin Hj Othman, PhD**

Professor  
Faculty of Economics and Management  
Universiti Putra Malaysia  
(Chairman)

**Khairil Wahidin bin Awang, PhD**

Associate Professor  
Faculty of Economics and Management  
Universiti Putra Malaysia  
(Internal Examiner)

**Shaufique Fahmi bin Ahmad Sidique, PhD**

Associate Professor  
Faculty of Economics and Management  
Universiti Putra Malaysia  
(Internal Examiner)

**Indah Susilowati, PhD**

Professor  
Diponegoro University  
Indonesia  
(External Examiner)



---

**NORAINI AB. SHUKOR, PhD**

Professor and Deputy Dean  
School of Graduate Studies  
Universiti Putra Malaysia

Date: 28 September 2017

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

**Normaz Wana bt Ismail, PhD**

Associate Professor  
Faculty of Economics and Management  
Universiti Putra Malaysia  
(Chairman)

**Shivee Ranjane a/p Kaliappan, PhD**

Senior Lecturer  
Faculty of Economics and Management  
Universiti Putra Malaysia  
(Member)

**Rusmawati binti Said, PhD**

Associate Professor  
Faculty of Economics and Management  
Universiti Putra Malaysia  
(Member)

---

**ROBIAH BINTI YUNUS, PhD**

Professor and Dean  
School of Graduate Studies  
Universiti Putra Malaysia

Date:

### Declaration by graduate student

I hereby confirm that:

- this thesis is my original work;
- quotations, illustrations and citations have been duly referenced;
- this thesis has not been submitted previously or concurrently for any other degree at any other institutions;
- intellectual property from the thesis and copyright of thesis are fully-owned by Universiti Putra Malaysia, as according to the Universiti Putra Malaysia (Research) Rules 2012;
- written permission must be obtained from supervisor and the office of Deputy Vice-Chancellor (Research and Innovation) before thesis is published (in the form of written, printed or in electronic form) including books, journals, modules, proceedings, popular writings, seminar papers, manuscripts, posters, reports, lecture notes, learning modules or any other materials as stated in the Universiti Putra Malaysia (Research) Rules 2012;
- there is no plagiarism or data falsification/fabrication in the thesis, and scholarly integrity is upheld as according to the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) and the Universiti Putra Malaysia (Research) Rules 2012. The thesis has undergone plagiarism detection software.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Matric No.: Noor Haslina Mohamad Akhir, GS36265

### Declaration by Members of Supervisory Committee

This is to confirm that:

- the research conducted and the writing of this thesis was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

Signature : \_\_\_\_\_  
Name of  
Chairman of  
Supervisory  
Committee : Associate Professor Dr. Normaz Wana bt Ismail

Signature : \_\_\_\_\_  
Name of  
Member of  
Supervisory  
Committee : Dr. Shivee Ranjane a/p Kaliappan

Signature : \_\_\_\_\_  
Name of  
Member of  
Supervisory  
Committee : Associate Professor Dr. Rusmawati binti Said

## TABLE OF CONTENTS

		Page
	<b>ABSTRACT</b>	i
	<b>ABSTRAK</b>	iii
	<b>ACKNOWLEDGEMENTS</b>	v
	<b>APPROVAL</b>	vi
	<b>DECLARATION</b>	viii
	<b>LIST OF TABLES</b>	xiii
	<b>LIST OF FIGURES</b>	xv
	<b>LIST OF ABBREVIATIONS</b>	xvi
	<b>CHAPTER</b>	
<b>1</b>	<b>INTRODUCTION</b>	1
	1.1 Introduction	1
	1.2 Background of the Study	1
	1.2.1 The Performance and Contribution of Craft Industry	3
	1.2.2 Creativity and Innovation in the Batik Industry	6
	1.2.3 Roles of Labour in the Batik Industry	7
	1.3 Statement of the Research Problems	8
	1.4 Objective of Study	9
	1.5 Significant of Study	10
	1.6 Organisation of Study	11
<b>2</b>	<b>BATIK INDUSTRY IN MALAYSIA</b>	12
	2.1 Introduction	12
	2.2 Batik Definition and Concept	12
	2.3 Batik Making Process	13
	2.4 Institutional Support in The Craft Industry	15
	2.4.1 Malaysian Handicraft Development Corporation	15
	2.4.2 National Craft Institute	16
	2.5 Batik as Cultural Heritage Product	16
	2.6 Summary	17
<b>3</b>	<b>LITERATURE REVIEW</b>	18
	3.1 Introduction	18
	3.2 Theoretical Literatures	18
	3.2.1 Theory of Input-output	18
	3.2.2 Theory of Firm Performance	19
	3.2.3 3.2.3 Resource Based View	22
	3.3 Empirical Literatures	23
	3.3.1 Batik and Contribution on Economic Perspectives	23

	3.3.2	Innovation and Performance	26
		3.3.2.1 The Definition of Innovation	26
		3.3.2.2 Innovation and Firm Performance	27
	3.3.3	Firm's Resources and Labour Creation in Firms	29
	3.4	Literature Gap	32
<b>4</b>		<b>METHODOLOGY</b>	<b>34</b>
	4.1	Introduction	34
	4.2	Economic Contribution of Batik Industry	34
		4.2.1 Data Source	34
		4.2.2 Input-output Techniques	35
		4.2.2.1 Foundation of Input-output Table	35
		4.2.2.2 Industrial Linkages Model	36
		4.2.2.3 Decomposition of Multiplier Analysis	39
	4.3	Innovation and Labour Creation in the Batik Industry	40
		4.3.1 Data Collection	40
		4.3.2 Design of the Questionnaire	40
		4.3.3 Research Sampling	41
		4.3.4 Empirical Techniques	44
		4.3.4.1 Descriptive Analysis	45
		4.3.4.2 Objective 2: Impacts of Innovation on Batik Firm Performance	45
		4.3.4.3 Objective 3: Labour Creation in Batik Industry	49
	4.4	Summary	53
<b>5</b>		<b>RESULTS AND DISCUSSION</b>	<b>54</b>
	5.1	Introduction	54
	5.2	Objective 1: Economic Contribution of Batik Industry	54
		5.2.1 Malaysian Economic Structure, 2010	54
		5.2.2 Batik-Making in Domestic Production, 2010	55
		5.2.3 Intersectoral Linkages of Domestic Production, 2010	58
		5.2.4 Impact of Final Demand Injection to Domestic Production, 2010	61
	5.3	Objective 2: Impacts of Innovation on Batik Firm Performance	63
		5.3.1 Innovation in the Batik Industry	63
		5.3.2 Summary Statistics	65
		5.3.3 Innovation and Firm Performance	66
		5.3.3.1 Cross Tabulation Analysis between Innovation and Firm Performance	66
		5.3.3.2 Regression Analysis between Innovation and Firm Performance	67
	5.4	Objective 3: Labour Creation in the Batik Industry	70
		5.4.1 Characteristics of Labour Market in the Batik Industry	70
		5.4.2 Summary of Statistics	72
		5.4.3 Firm Resources and Labour Creation in the Batik Industry	73
	5.5	Summary	80

<b>6</b>	<b>SUMMARY, CONCLUSION AND POLICY IMPLICATIONS</b>	<b>81</b>
6.1	Introduction	81
6.2	Summary and Conclusion	81
	6.2.1 Economic Contribution of Malaysian batik industry	81
	6.2.2 Impact of Innovation on Batik Firm performance	82
	6.2.3 Labour Creation in the Batik Industry	83
6.3	Policy Implications and Recommendations	83
6.4	Future Research	85
	<b>REFERENCES</b>	<b>86</b>
	<b>APPENDICES</b>	<b>101</b>
	<b>BIODATA OF STUDENT</b>	<b>118</b>
	<b>LIST OF PUBLICATIONS</b>	<b>119</b>





## LIST OF TABLES

<b>Table</b>		<b>Page</b>
1.1	SMEs Definition: Annual Sales Turnover and Employees	2
1.2	Number of New Product Designs and Designs Commercialized by Craft Categories	4
2.1	General Batik Making Process	14
4.1	Simplified Malaysia Input-Output Table	35
4.2	The Total Number of Batik Enterprises in Malaysia (2014)	42
5.1	Value and Contribution of Domestic Output, 2010	55
5.2	Batik Making in Domestic Production, 2010	56
5.3	Industrial Linkages in Domestic Production, 2010	59
5.4	Changes in Prices in Manufacturer of Textiles, 2010	60
5.5	Output level and changes in selected sector (RM Thousand), 2010	60
5.6	Impacts of Final Demand Injection in Batik Consumption on Primary Inputs (in RM Thousand)	61
5.7	Decomposition of output effects: direct and indirect effects (selected sectors)	62
5.8	Types of batik and innovation in the batik industry	63
5.9	Extent of Innovation in Batik Industry	64
5.10	Descriptive Statistics and Correlations	66
5.11	Cross Tabulation Table for Innovation and Firm Performance (%)	67
5.12	Impact of Innovation on Firm Performance	68
5.13	Characteristics of Labour Market in Batik Industry	71
5.14	Sizes of Employment in Batik Industry	71
5.15	Job Security Scheme and Job Benefit in Firms	72

5.16	Summary Statistics	73
5.17	The Impact of Firm Resources on Total Workers in Batik Industry	76
5.18	The Impact of Firm Resources on Total Designers and Production Workers in Batik Industry	78



## LIST OF FIGURES

<b>Figure</b>		<b>Page</b>
1.1	Malaysian Handicraft Sales (RM million)	4
4.1	Sampling Procedure	43
4.2	Research Sampling	44
4.3	Theoretical Framework for Innovation and Firm Performance	45
4.4	Conceptual Framework for Firm Performance	48
4.5	Theoretical Framework for Labour Creation	49
4.6	Conceptual Framework for Labour Creation in Firms	52

## LIST OF ABBREVIATIONS

GDP	Gross Domestic Product
IO	Input-Output
MHDC	Malaysian Handicraft Development Corporation
MO	Market Orientation
MSIC	Malaysia Standard Industrial Classification
NCI	National Craft Institute
NGO	Non Governmental Organization
OLS	Ordinary Least Squares
SMEs	Small and Medium Enterprises
SMIDEC	Small and Medium Development Corporation
SOCISO	Social Security Organization
SOP	Standard Operating Procedure
UNESCO	United Nations Educational, Scientific and Cultural Organization
VIF	Variance Inflation Factor

## CHAPTER 1

### INTRODUCTION

#### 1.1 Introduction

The chapter is structured as follows. The background of study on batik industry is presented in Section 1.2. Following background of study, Section 1.3 presents the statement of the research problems and section 1.4 presents the objective of study. Significant of study will take place at the next section. In the last section, organisation of study is presented.

#### 1.2 Background of the Study

Malaysia is rich with an abundance of craft resources and one of them is batik craft. Batik is a handicraft product that belongs to the textile-based category (Amin, 2006). In fact, it refers to a fabric-dyeing method that uses the resist technique (Yunus, 2011). Commonly, people recognise batik as decorated textile from South East Asia, because of its unique designs and colours (Kheng, 2002), as well as various processes involved in batik-making (Azmi et al., 2009; Yunus, 2011).

The local batik industry in Malaysia has long started since the 15th Century of the Common Era (Azmi et al., 2009). Starting from small-scale activities, the batik industry has developed into a successful rural industry and is also known at national level (Nordin and Bakar, 2012). Looking at the Malaysian economic structure, this industry falls under the manufacturing sector of Small and Medium Enterprises (SMEs) (Ismail, Mokhtar, and Ali, 2013; Hairuddin, Noor, and Malik, 2012; Mokhtar and Ismail, 2012). The Small and Medium Industries Development Corporation (SMIDEC) categorises SME businesses into three levels, namely microenterprise, small enterprise, and medium enterprise (refer Table 1.1). Being a textile-based industry that is classified in the manufacturing sector, batik firm is any enterprise with sales turnover not exceeding RM50 million per annum or has full-time employees less than 200.

In Malaysia, SMEs play a role in the nation's economy and become a major source of economic contribution. For instance, they contribute to the economic growth employment. The SME Annual Report 2013/2014 highlights that since 2004, SMEs in Malaysia has surpassed the country's economic growth in total, despite the difficulties in the global business environment. Looking at the economic sector performance, the increase of SME share in Gross Domestic Product (GDP) from 2010 to 2014 was contributed by the construction and services, as well as manufacturing sectors. From the Economic/SME Census 2011 conducted by the Department of Statistics Malaysia, the

strong performance of the manufacturing subsector in 2010 was due to growth in sectors such as textiles and apparels (26.5 percent), food and beverage products (15.9 percent), and fabricated metal products (10.5 percent). In 2012, the Malaysian Industrial Development Authority (MIDA) has included batik in the list of promoted activities and products in the manufacturing of textiles and textile products. The Annual Survey of Manufacturing Industries 2013-2015 found that the gross output of textiles, wearing apparel, and leather products increased from RM 12.2 billion in 2012 to RM 14 billion in 2014. In terms of employment, there are 6.2 million SME employees, reflecting an addition of 1.1 million workers in the SME job market in 2014 (SME Annual Report 2014/2015).

**Table 1.1 : SMEs Definition: Annual Sales Turnover and Employees**

Size	Micro		Small		Medium	
	Sales turnover	Employees	Sales turnover	Employees	Sales turnover	Employees
Manufacturing	Less than RM300,000	Less than 5 employees	RM300,000 to < 15 million	5 to < 75 employees	RM15 million to ≤ 50 million	75 to < 200 employees
Services and Others			RM300,000 to < 3 million	5 to < 30 employees	RM3 million to ≤ 20 million	30 to < 75 employees

Source: SME Annual Report 2013/2014

Notes: < is less than , ≤ is not exceeding

Due to contribution of SMEs to the nation's economic growth and employment, the batik textile industry is expected to have an opportunity to contribute to employment among local communities and SME's revenues, thus becomes a contributor to the Malaysian economic development. It was also discovered that the batik industry has the potential to contribute to other industries such as tourism (Sofian and Azman, 2010; Ahmad et al., 2011; Choy, 2013) and fashion industries (Yunus, 2011). However, there is no specific data related to batik industry in the SME Annual Report to directly measure the contribution of batik industry to the Malaysian economy. The SME Annual Report only shows the contribution of textile manufacturing to the Malaysian economy. Hence, other data types that represent batik industry at the national level will be used. This includes the Malaysia Input-Output (IO) Table 2010 that provides data regarding batik-making, as part of textile manufacturing. The input-output table enables the contribution of batik industry to be evaluated via interindustry transactions in the Malaysian economic structure.

Batik-making has been in the market since last 2000 years (Robinson, 2001), its techniques require batik entrepreneurs to be highly skilled, creative, and innovative to produce excellent quality products, especially in terms of designs, types of goods, durability, and usefulness, for them to be successful and stay competitive in the industry. There is a link between creativity, innovation, and economic performance. Creativity

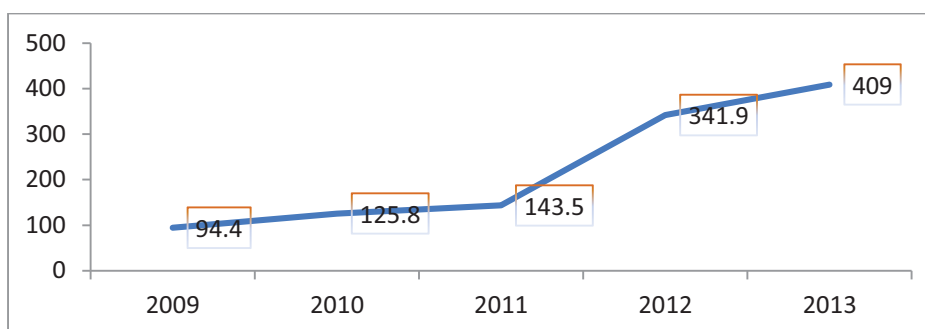
refers to the generation of new ideas (UNCTAD, 2008), while innovation is the successful utilisation of new ideas (Okpara, 2007). Potecea and Cebuc (2010) highlighted that the reasons for batik firms to stay innovative are to increase market share, capture new market, improve product quality, provide better product choice, replace outdated products, and reduce environmental impact. Thus, creativity affects the economy through successful utilisation of creative ideas to provide better alternative for commercialisation, which is known as innovation in stimulating market expansion with new values. As batik is a creative craft, the batik industry therefore requires creative thinking to generate better ideas, as well as innovation to integrate those ideas and transform them into valuable things prior to commercialisation. This in turn can assist batik firms to boost their performance through higher demand, thus lead to higher sales.

The introduction of new or improved process shows that batik techniques have evolved from the original approach (Dawa, 2002). Throughout the evolution process, the batik industry has two schools of thought: first is that the modern batik entrepreneurs allow the use of machine in the batik-making and second is the traditional batik entrepreneurs who preserve the aestheticity of batik as handmade product. In the local market, a majority of batik entrepreneurs prefer to use traditional methods such as hand drawing or block printer in batik-making (Hairuddin, Noor, and Malik, 2012). These methods are labour intensive, because of less advanced technology. Most of the labour-intensive methods are used in rural areas, so the growth in the batik industry creates job opportunity for the locals (Redzuan and Aref, 2009).

The batik industry is not only valuable to the cultural heritage development; it is also an asset to the country's economic growth in the future. Developed by small and medium enterprises, it is crucial to understand the performance, contribution, innovation, and labour aspects in developing the local batik industry. The study contributes to the literature in a number of ways. First, it offers new findings pertaining to the transactions between batik industry and other production sectors that are underrepresented in Malaysia. Total sales is one of the firm performance relevant indicators and it is therefore used to measure firm performance. Second, this study offers a detailed view of the impacts of all four Schumpeterian innovation types on batik sales. Third, statistical evidence for corporate sources and labour creation in batik firms are also discussed in this study.

### **1.2.1 The Performance and Contribution of Craft Industry**

In Malaysia, the Malaysian Handicraft Development Corporation (MHDC) is the main government agency that serves to develop and coordinate activities and programmes to enhance the status, performance, and contribution of craft industry in the national economy. MHDC implements various initiatives and methods at domestic and global levels to ensure that craft industry keeps moving forward in the future. Figure 1.1 shows the performance of craft sales in Malaysia since 2009 to 2013.



**Figure 1.1 : Malaysian Handicraft Sales (RM million)**

Source: Series of Malaysian Handicraft Annual Report, 2009-2013

Figure 1.1 shows that the sales of craft increased to RM341.9 million in 2012, showing a rise of RM198.3 million as compared to 2011 (RM143.5 million). The sales then increased to RM409 million in the following year. The initiatives and methods in the development programme include the strategic direction from 2010-2016, which encompass marketing channels in domestic and international markets, the introduction of new craft products in the market, besides enables craft entrepreneurs to produce quality products to meet consumer demand, and increases trained manpower in the craft industry. All these strategies produce positive impact to the national craft industry. As part of the textile-based products, batik has the potential in product development by presenting new designs to be commercialised in the market. Therefore, the government has implemented research and development (R&D) programme with the aim to produce competitive batik products and diversify craft product line according to their market segment, to cater both domestic and international demands. Table 1.2 illustrates the product development that consists of creation and commercialisation of new designs from 2011 to 2013.

**Table 1.2 : Number of New Product Designs and Designs Commercialized by Craft Categories**

Craft Categories	Number of New Designs			No. of Designs Commercialized		
	2011	2012	2013	2011	2012	2013
Textile-based	2,125	2,435	2440	317	2,452	726
Earth-based	1,183	547	792	162	59	252
Metal-based	945	447	435	63	365	141
Forest-based	1,674	1,633	1592	283	668	384
Total	5,927	5,062	5,259	825	3,544	1503

Source: Series of Malaysian Handicraft Annual Report, 2011- 2013



In 2011, 5,927 new designs were produced by the Malaysian Handicraft, in collaboration with local craft entrepreneurs, where 825 designs were commercialised. Out of that, 38 percent are textile-based designs. In 2012 and 2013, the percentage of new textile-based designs was higher than other categories. For commercialised designs, the percentage of textile increased substantially in 2012 from 2011, however the percentage decreased in 2013, which is consistent with the contraction value of the overall performance. Table 1.2 shows that most of new products that incorporate new designs come from textile products. To support new product development in textile-based activities, MHDC has organised and participated in fashion shows at domestic and international levels. Batik products had been showcased in 17 fashion shows, with 1,059 collections in 2012 (Malaysian Handicraft Annual Report, 2012). Among fashion shows that raise the prestige of batik products are the National Craft Day Fashion Show, as well as the one held in-conjunction with Prince William & Kate Middleton's visit to Malaysia, the Malaysian London Nite & Malaysian London Weeks 2012, and the Miss Tourism International Final 2012. To preserve and enhance the quality of batik products, MHDC provides laboratory to upgrade the quality of dyeing so that the products can meet the international standards for batik, which is MS692: 2007.

From the Malaysian Handicraft Annual Report 2009-2013, the current study attempts to explain the performance level in terms of production or sales and identify the number of workers in the batik industry. The data in the annual report only capture performance by craft category in general, such as textile-based, earth-based, metal-based, and forest-based. Referring to the key performance indicator in the local craft industry, MHDC acknowledges batik as the primary contributor to the craft sales in Malaysia (Buletin Kraftangan 03, 2012).

On the other hand, batik is regarded as highly valuable for the Malaysian heritage (Hairuddin, Noor, and Malik, 2012; Mokhtar and Ismail, 2012). As batik is a cultural heritage product<sup>1</sup>, it can support and promote cultural tourism activities in Malaysia. According to the Ninth Malaysian Plan (2006-2010), the tourism industry continues to be the main foreign exchange earner, contributing to growth, investment, and employment, as well as strengthening services account of payment balance. According to Tourism Malaysia, the tourists who visit Malaysia increased from 5.56 million in 1998 to 25.72 million in 2013, contributing to the increase of revenue from RM8.6 billion in 1998 to RM65.44 billion in 2013<sup>2</sup>. The resilience of the tourism industry is attributed to the active participation of private and public sectors in promotion and marketing, diversification of target markets, and improvement of the competitiveness of tourism products and services to keep attracting tourists to visit Malaysia. Thus, the growth in

---

<sup>1</sup> United Nations Educational, Scientific and Cultural Organization (UNESCO) has classified Indonesian batik as a part of the "intangible cultural heritage of humanity", one of the traditions or living expressions that contains symbols and a philosophy of the human life cycle that is important in shaping the identity of society. The global recognition by UNESCO will give the old tradition of batik some degree of protection under the UNESCO charter. In the meantime, this recognition creates better opportunities for the Malaysian batik to develop in a more advanced manner, not only locally, but also internationally.

<sup>2</sup> [www.corporate.tourism.gov.my](http://www.corporate.tourism.gov.my)

the batik industry can offer attractive tourism products that will further boost the country's tourism industry, thus contribute to the Malaysian economic growth.

### 1.2.2 Creativity and Innovation in the Batik Industry

Batik techniques are related to textile decoration, with beautiful motifs and high quality colours. Bakhtiar et al. (2010) stated that batik is classified as a work of art on cloth. It provides contact with creative potential that lies within all of us. Noor and Nordin (2012) mentioned that batik is an indigenous cultural artefact that is influenced by creativity of an individual or collective human action, which is inspired by natural surroundings. Okpara (2007) and Racela (2014) believe that innovation begins with creative ideas. Creativity is associated with cognitive process such as generation of ideas that subsequently turns into innovation, which is action-oriented when the creative ideas are implemented.

The combination of creativity and innovation creates an opportunity for batik entrepreneurs to produce a new range of batik products beyond its traditional use, which is initially designed for clothings, such loose knee-length tunic (*baju kurung*) and woman's caftan, to more innovative products such as soft furnishings and decorations, as well as modern attire such as ties, shawls, and scarves. The earliest forms of Malay batik is known as the rainbow batik (*pelangi*), it was produced during the reign of Sultan Zainal Abidin II (1773-1808) with no use of wax as resist material, that incorporated other techniques such as the tie-dye technique (Osman, 2002). Furthermore, via innovation, the batik technique diversifies to block batik, hand-drawn batik, screen batik, and recently digital batik. In the making of block batik for instance, the block was carved from wood, before being substituted by zinc, iron or copper blocks used nowadays. Meanwhile, the making of digital batik depends on modern technology or machine in every stages of batik-making process. Some batik entrepreneurs also make significant improvement in batik designs, such as the introduction of abstract, geometry, stripe, as well as designs that reflect natural surroundings rather than using common designs such as flowers or leaves. In the colouring process, batik entrepreneurs use natural dye or chemical dye or combination of both. With the aim to enhance the competitiveness of Malaysian batik, batik entrepreneurs, the Malaysia Handicraft, and the National Craft Institute have developed new batik techniques such as overlapping, crack, silica, discharge, and scratch. Designs, colours, and techniques add value to the artwork, which produce better quality batik (Azmi et al., 2009).

In the last few years, a majority of local batik entrepreneurs used direct channels to gain access to the market or sell directly to wholesalers and retailers (Amin, 2006). Recently, due to widespread information, communication, and technology development, new marketing and promotional tools such as media and internet are used by batik entrepreneurs. Local batik entrepreneurs manage their firm manually or use traditional methods in running their own business or let their family members manage the business without involving professional workers. Ismail et al. (2012) and Meutia and Ismail

(2012) believed that to sustain the competition and face the uncertainty in consumers' preference, firms need to develop good strategy in decision-making, business planning, as well as interaction with employees, customers, funding organisations, the government, and professional organisations.

In fact, innovation is carried out in the batik industry through batik-making process, batik products, marketing, and organisational methods. The batik industry is expected to better expand if innovation is applied in producing unique batik products. This offers the best opportunity for the society to acquire something which is never made before to further stimulate economic growth (Lopez-Claros, 2011).

### **1.2.3 Roles of Labour in the Batik Industry**

In Malaysia, most batik entrepreneurs still consider batik as art textile that its authenticity as handmade product should be retained. Amin (2006, p.1) defines the craft industry as “a group of individuals and companies who are involved in the design, production, and/or marketing of products which display unique and distinctive characteristics of design, technique, and presentation where useful artistic and decorative objects are made completely by hand or using only simple tools, which can be aesthetic, artistic, creative, culturally attached, decorative, functional, traditional, religiously, and socially symbolic and significant”. Yojana and Sansad (2006) define craft products as artistic and traditional handmade items which are created by simple tools. This reiterates the role of batik workers in all stages of batik-making, from drawing, followed by colouring, fixing, dewaxing, washing, and finally, drying. Although there are modern tools that are created for some batik techniques such as canting for hand-drawn batik, copper block for block batik, and banner screen for screen batik, the authenticity of each technique in producing handmade batik is still preserved by batik workers, especially in drawing and colouring processes. Their role in the drawing process includes: (i) canting to make creative patterns on hand-drawn batik fabric; (ii) a funnel pen to create stencil screen design on a banner screen and then a squeegee to force the ink through the fine-meshed screen onto the fabric in screen batik production; and (iii) block patterns stamped on fabric. The batik-making is unique, when every workers in each batik process are specialised, in which they are not involved in all stages in batik-making. Hence, they master a particular process and this helps to reduce the time needed to produce a piece of batik fabric. With the aim to retain the identity of handmade products, this industry should be equipped with enough workers to manage each stage in the batik-making process.

Classified as “intangible cultural heritage of humanity”, the knowledge and skills to produce batik is inherited from the ancestors, which is passed on to descendants later on. As of today, this heritage industry still survives and become a source of the various contributions to the national economy. Thus, the new generation workers have to ensure that the knowledge and skills in batik-making will not disappear in the future. As a form of textile art, the skills of batik workers, innovation within firm, as well as experience in batik will place Malaysian batik as high quality handmade product (Azmi et al., 2009).

To sustain and stay competitive in the future, the industry should devise a good strategy in human capital development. In fact, the government provides formal education and trains new workforce in batik craft at the National Craft Institute (NCI), rather than relying solely on inherited knowledge and skills. NCI is a craft education centre, with the aim to produce graduates who are knowledgeable, highly skilled, creative, innovative, and competent to meet the needs for skilled workforce in the craft industry. Although digital batik depends on modern technology and contradicts with the principle held by most local batik entrepreneurs in the drawing process, batik workers still need to have skills, creativity, and innovation to ensure that the machine will print high quality designs on digital batik fabric. This indicates the importance of workers in the batik-making process.

### 1.3 Statement of the Research Problems

The government implements many measures to facilitate and develop the local batik industry. The government's commitment to develop the local batik industry is illustrated via a circular for batik to be worn by public officials every Thursday since 2008 (*Surat Pekeliling Perkhidmatan Bil. 1 tahun 2008*). Based on the key performance indicator in the local craft industry, the MHDC acknowledges batik as the main contributor in improving craft sales in Malaysia. In addition, batik is projected to lead the Malaysian craft sales in reaching the set target of RM1 billion in the year 2016 (Buletin Kraftangan 03, 2012). The target signifies the importance and potential of batik industry in the development of Malaysian craft, as well as rural economy in this country. Although the local market shows positive outlook, some batik entrepreneurs are still categorised as microenterprise owners, according to the SME classification (Hairuddin, Noor, and Malik, 2012). As rural industry, batik will face intense competition and challenges that hinder its growth. Batik firms are unable to reach their full potential or are restricted to only have day-to-day income (Mokhtar and Ismail, 2012). It raises the issue of how the batik industry is associated with the Malaysian economy.

Therefore, the first issue addressed in this study is on measuring the economic contribution of the batik industry to the Malaysian economy. Throughout the years, this industry contributes by creating job opportunity for local communities and boosting the country's fashion and tourism industries. However, it is difficult to directly measure the contribution as there is no series data regarding the performance of batik industry, even in the SME Annual Reports of Malaysia or Malaysian Handicraft Annual Reports. Therefore, the Malaysian Input-Output Table that has the data is used to measure the economic contribution of batik industry to the Malaysian economy, which is through interindustry transactions between the batik industry and other production sectors in the Malaysian economic structure. Therefore, there is a need to identify the contribution of batik industry to the Malaysian economy. Does batik industry contribute to the Malaysian economy? How does the batik industry contribute to the Malaysian economy?

The second issue highlighted in this study is the impact of innovation on batik firm performance. At firm level, innovation is referred as changes in firm activities that encompass product, process, organisation, and marketing, with the objective to improve the firm performance (OECD and European Communities, 2005). However, some batik entrepreneurs tend to adopt traditional approach in managing firm activities. The craft items are designed and created to fulfil the local customer preference and eventually sold locally and nationally (Redzuan and Aref, 2011). Inherited from ancestors to the next generation, most of batik firms are fully managed by family members. Due to little knowledge in information technology (IT), they record their sales and credit manually or use 'middleman' services to promote their batik products on social network like Facebook and blogs (Hairuddin, Noor, and Malik, 2012). Meanwhile, OECD (2000) acknowledges that innovation is critical in determining firm success. Therefore, there is an issue related to innovation and firm performance: does innovation significantly influence batik firm performance?

The third issue addressed in this study is labour creation in the batik industry. Batik techniques are labour intensive, in which those involved are open to less radical approaches. Most entrepreneurs are not interested in using modern machines to produce batik. They believe that a high dependency on machines could jeopardize the traditional aesthetic and cultural value, the identity of the product, the skills of batik makers, and the originality of batik as a handmade product (Redzuan and Aref, 2009; Hairuddin, Noor, and Malik, 2012). With a sufficient amount of workers to manage each batik-making stage, batik entrepreneurs can save time and increase the number of production. However, at present, a majority of employees are older folks (Redzuan and Aref, 2011), who are hired as contract workers. This may reduce the production at present and in the future. In terms of demand, Malaysian batik has high demand, especially among government employees, as well as local and foreign tourists from Asia, Europe, Middle East, Africa, and United States of America (Malaysian Handicraft Annual Report, 2014). Therefore, batik entrepreneurs need additional workers to cope with the market demand. Nonetheless, low capital and credit ability can restrict batik entrepreneurs from having sufficient workers thus they can only produce batik based on order, while keeping certain pieces of batik as samples (Hairuddin, Noor, and Malik, 2012). This issue is related to labour creation in the batik industry: what are firm resources that can significantly influence labour creation in batik firms?

#### **1.4 Objective of Study**

The general objective of current study is to investigate economic contribution, innovation, and labour creation of batik industry in Kelantan and Terengganu. Meanwhile, the specific objectives are highlighted as follows:

1. To measure the economic contribution of batik industry to the Malaysian economy through interindustry transaction using the input-output technique.
2. To analyse the impact of innovation on the performance of batik industry.

3. To determine the firm resources that influence labour creation in the batik industry.

### 1.5 Significant of Study

The findings from this study will benefit the society and the country, given that batik industry plays an important role in the Malaysian cultural heritage development and is a source of earnings. First, at the national level, the findings are expected to provide valuable information to the government regarding economic activities in rural areas. The findings related to firm performance, contribution to the country, innovative activities, and employment level in the batik industry will be the input for the government to formulate strategic planning and develop policies in rural areas. The aim of this study is consistent with the Eleventh Malaysia Plan's, which is to 'anchor growth on people', demonstrating that the national growth is not only reflected by GDP growth or per capita income, but it is also represented by the concept of "people's economy" or "people's wellbeing". An increase in national income should be followed by improvement in the quality of life. The growth in the batik industry will assist the government in achieving the target to reengineer economic growth for prosperity by increasing the demand for SME products, especially at the microenterprise level.

Second, this study is undertaken to find out the contribution of the batik industry to the Malaysian economy. The results will provide understanding to policymakers regarding the importance and contribution of batik industry to other production sectors in the Malaysian economic structure despite being a rural industry. The findings are expected to provide further understanding in the batik industry development to all parties involved, especially batik entrepreneurs and MHDC, on the relationship between innovation and batik firm performance. In general, the batik industry is left behind in terms of innovation, as it still adopts traditional approach in firm activities. This study is important to present to what extent innovation is implemented in the local batik industry. The area of study is related to the Malaysia's National Missions to become a developed country, by upgrading the country's capacity in knowledge, creativity, and innovation, as well as having 'first-class mentality'. At present, Malaysia places innovation at the core of development and reformation agenda, to propel us in becoming a high income nation by 2020. A review of past economic activities of countries such as Korea, Germany, Japan, Taiwan, and China found that their economic progress was based on the agricultural sector. However, they have progressed to an economy that emphasises on high level of knowledge, skills, innovation, and expertise. Thus, this study will help us to understand how innovation can be embedded with traditional methods and be developed within the batik industry.

Fourth, this study will provide information regarding employment issues in the batik industry, especially on the factors that influence labour creation. The uniqueness of this industry is its significance on the livelihood of local communities in terms of economic variables such as job opportunities and household income. Information pertaining to the

labour creation factors in the batik industry is crucial to help batik entrepreneurs in upgrading economic well-being of local communities. A good job prospect and income will prevent younger generation from migrating to other places to seek employment. The ability to retain highly-educated individuals, especially those who are skilled, knowledgeable, technologically-equipped in batik in a village is regarded to be positive in the long-term development of the batik industry. A sustainable growth in the batik industry in the East Coast regions will strengthen the economic corridors of batik to fuel regional development.

Next, this study will contribute to data collection in the batik industry, especially on economic values such as firm sales, product development, and number of workers. Finally, the findings will help the government and relevant agencies to understand the potential and challenges faced by this industry. The government can then form policies that are related to the development and preservation of national heritage programme as an effort to ensure batik entrepreneurs have access to economic opportunities and future generations will view batik as a Malaysian heritage. In addition, batik has a bright future when it is identified as one of the creative industry activities. Batik features which are related to creative, cultural and economic aspects will push this creative craft to be a driver in the Malaysian craft industry at both national and international levels in the future.

## **1.6 Organisation of Study**

This study is divided into six chapters. Chapter One introduces the study background, the problem statement, research objectives, as well as the significance of the study. The second chapter focuses on the development of batik industry in Malaysia. There are four subsections in Chapter Two namely definition and concept of batik, batik-making process, the institutional support in the craft industry, and batik as cultural heritage. Chapter Three reviews literature that are related to the contribution of batik to economy, innovation, and firm performance, as well as labour creation in SMEs.

Chapter Four discusses research methodology and provides detailed techniques that are used to address the research questions. The following chapter discusses and elaborates the findings to identify if the objectives have been achieved. The final chapter presents conclusion and recommendations. The recommendations are for government, relevant agencies, and batik entrepreneurs to consider in developing the batik industry in Malaysia.

## REFERENCES

- Addison, J.T., Portugal, P., and Varejao, J. (2014). Labor demand research: Toward a better match between better theory and better data. *Labour Economics* 30: 4-11
- Aghion, P., Akcigit, U., and Howitt, P. (2013). What Do We Learn From Schumpeterian Growth Theory? NBER Working Paper Series, Working Paper 18824.
- Ahmad, H., Jusoh, H., Siwar, C., Buang, A., Noor, M.S.H., Ismail, S.M., and Zolkapli, Z.A. (2011). Pelancongan Budaya Di Koridor Ekonomi Wilayah Pantai Timur (ECER): Isu Dan Cabaran. *GEOGRAFIA Malaysian Journal of Society and Space* 7. Special Issue: Social and Spatial Challenges of Malaysian Development, 180-189. Retrieved from <http://journalarticle.ukm.my/3212/> 5 October 2013
- Ahrens, J.P., Landmann, A., and Woywode, M. (2015). Gender preferences in the CEO successions of family firms: Family characteristics and human capital of the successor. *Journal of Family Business Strategy* 6 (2): 86-103
- Alarcon, J.V (1985). Transition Growth and Basic Needs: A Historical Analysis. Working paper no.31, ISS-PREALC.
- Amare, G. (2012). Reviewing the Values of a Standard Operating Procedure. *Ethiopian Journal of Health Science*. 22(3), 205–208. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3511899/> 22 June 2014
- Amin, I.M. (2006). *Manufacturing and Marketing of Traditional Crafts: Malaysian Perspective*. Paper presented at the meeting of the APEC/SME Seminar on Support for Local and Cottage Industries, Hanoi, Vietnam, September 2006. Retrieved from [http://www.asiaseed.org/apec2006sme/presentation\\_at\\_pdf/session3\\_2\\_ismail\\_outline.pdf](http://www.asiaseed.org/apec2006sme/presentation_at_pdf/session3_2_ismail_outline.pdf) 22 June 2014
- Anwar, N., Supadi, Rahab, and Afuan, L. (2013). Strategy to Increase Competitiveness of Batik Banyumasan. *International Journal of Business and Social Science* 4 (4): 305-311. Retrieved from [http://ijbssnet.com/journals/Vol\\_4\\_No\\_4/31\\_2\\_January\\_2015](http://ijbssnet.com/journals/Vol_4_No_4/31_2_January_2015)
- Ashworth, G.J., and Larkham, P.J. (Edited) (1994). *Building a New Heritage: Tourism, Culture and Identity in the New Europe*. Routledge Library Editions: Tourism. Retrieved from <http://samples.sainsburysebooks.co.uk/9781135083328> 25 April 2015
- Azmi, J., Umor, Z., Ismail, M.S., Abdullah, K., Ali, N., and Kamaruzaman, N. (2009). *Seni kraf Batik: Motif & Teknik*. Institut Kraf Negara.



- Backman, M., and Palmberg, J. (2015). Contextualizing small family firms: How does the urban-rural context affect firm employment growth?. *Journal of Family Business Strategy* 6 (4): 247-258
- Bakar, L.J.A., and Ahmad, H. (2010). Assessing the relationship between firm resources and product innovation performance. *Business Process Management Journal*, 16 (3): 420-435
- Bakhtiar, A., Susanty, A., Sriyanto and Handayani, O.P. (2010). *Conceptual Model to Enhance Creativity of The Batik industry*. Proceedings from ICIEBM. 125-130. Retrieved from <http://eprints.undip.ac.id/35036/1/> 12 September 2014
- Barney, J.B. (1991). Firm resources and sustained competitive advantage. *Journal of Management* 17: 99-120.
- Bekhet, H.A., and Abdullah, A. (2010). Energy Use in Agriculture Sector: Input-Output Analysis. *International Business Research* 3 (3): 111-121.
- Blackburn, R.A., Hart, M., and Wainwright, T. (2013). Small Business Performance: Business, Strategy And Owner#Manager Characteristics. *Journal of Small Business and Enterprise Development* 20 (1): 8-27
- Blanco-Mazagatos, V., Quevedo-Puente, E.D., and Delgado-García, J.B. (2016). How agency conflict between family managers and family owners affects performance in wholly family-owned firms: A generational perspective. *Journal of Family Business Strategy* 7: 167–177
- Boheim, R., Stiglbauer, A., and Ebmer, R.W. (2009). On The Persistence on Job Creation in Old and New Firms. *Economics Letters* 105: 17-19.
- Bozkaya, A., and Van Pottelsberghe De La Potterie, B. (2008). Who funds technology-based small firms? Evidence from Belgium. *Economics of Innovation and New Technology* 17(1-2): 97-122.
- Buletin Kraftangan 03. (2012). *Medium Transformasi Kraf Malaysia. Kraftangan Malaysia*. Malaysia Handicraft Development Corporation. Retrieved from [www.kraftangan.gov](http://www.kraftangan.gov) 23 June 2013
- Cameron, G. (1998). Innovation and Growth: A Survey of the Empirical Evidence. Working Paper. Nuffield College, Oxford University. Retrieved from <http://www.nuff.ox.ac.uk/users/cameron/papers/empiric.pdf> 23 November 2015
- Cecchini, M., Leitch, R., and Strobel, C. (2013). Multinational Transfer Pricing: A Transaction Cost and Resource Based View. *Journal Of Accounting and Literature* 31: 31-48

- Chandler, G.N., and Jansen, E. (1992). The founder's self-assessed competence and venture performance. *Journal of Business Venturing* 7: 223-236
- Chaudhuri, K., Kumbhakar, S.C., and Sundaram, L. (2016). Estimation of firm performance from a MIMIC model. *European Journal of Operational Research* 255: 298-307
- Chen, W., Xu, D., and Liu, J. (2015). The forest resources input-output model: An application in China. *Ecological Indicators* 51: 87-97
- Choy, E.A. (2013). Pembangunan Pelancongan Lestari Di Melaka: Perspektif Pelancong. *GEOGRAFIA Malaysian Journal of Society and Space* 9 (3): 12-23. Retrieved from <http://www.ukm.my/geografia/images/upload/2.geografia-july%202013-er%20ah%20%20choy-edkat.pdf> 5 October 2013
- Clulow, V., Barry, C., and Gerstman, J. (2007). The Resource-Based View And Value: The Customer-Based View of The Firm. *Journal of European Industrial Training* 31 (1): 19-35
- Coad, A., Segarra, A., and Teruel, M. (2016). Innovation and firm growth: Does firm age play a role?. *Research Policy* 45: 378-400
- Cozzarin, B.P. (2004). Innovation quality and manufacturing firms' performance in Canada. *Economics of Innovation and New Technology* 13(3): 199-216
- Creative Economy Report 2008. The Challenge of Assessing The Creative Economy: Towards Informed Policy-Making. Retrieved from [www.unctad.org.my](http://www.unctad.org.my) 17 December 2014
- Creative Economy Report 2013 Special Edition: Widening Local Development Pathways. United Nations Development Programme (UNDP and the United Nations Educational, Scientific and Cultural Organization). Retrieved from [www.unesco.org.my](http://www.unesco.org.my) 14 July 2014
- Creative Economy: A Feasible Development Option. Creative Economy Report 2010. Retrieved from [www.unctad.org.my](http://www.unctad.org.my) 17 December 2014
- Creative Industries Economic Estimates January 2014. Department for Culture, Media and Sport, UK. Retrieved from <https://www.gov.uk/government/statistics/creative-industries-economic-estimates-january-2014> 22 July 2014
- Croitoru, A. (2012). Schumpeter, J.A., 1934 (2008), *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle*, translated from the German by Redvers Opie, New Brunswick (U.S.A) and London (U.K.): Transaction Publishers. A review to a book that is 100 years old. *Journal Of Comparative Research In Anthropology And Sociology* 3 (2): 137-148

- Cucculelli, M., and Bettinelli, C. (2015). Business Models, Intangibles And Firm Performance: Evidence On Corporate Entrepreneurship From Italian Manufacturing SMEs. *Small Bus. Econ.* 45: 329- 350
- Dachs, B., and Peters, B. (2013). Innovation, employment growth, and foreign ownership of firms: A European perspective. *Research Policy* 43 (1): 214-232
- Davis, S.J., Haltiwanger, J., and Schuh, S. (1996). Small Business and Job Creation: Dissecting the Myth and Reassessing the Facts. *Small Business Economics* 8 (4): 297-315
- Dawa, M.N.A. (2002). Sejarah dan Perkembangan Teknik Membatik di Malaysia. Proceedings from *Seminar Batik: Ekspresi, Eksplorasi, dan Komunikasi*. Institut Kraf Negara, Perbadanan Kemajuan Kraftangan Malaysia, pp. 6-11
- Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 14(1): 57-74. Retrieved from <http://dx.doi.org/10.5465/AMR.1989.4279003> 16 August 2017
- Fagerberg, J. (2009) A guide to Schumpeter. Oslo: University of Oslo: Centre for Technology, Innovation and Culture. Retrieved from [http://www.cas.uio.no/Publications/Seminar/Confluence\\_Fagerberg.pdf](http://www.cas.uio.no/Publications/Seminar/Confluence_Fagerberg.pdf) 20 June 2015
- Faggioa, G., and Konings, J. (2003) Job Creation, Job Destruction And Employment Growth In Transition Countries In The 90s. *Economic Systems* 27: 129-154
- Fah, L.Y., and Hoon, K.C. (2009). *Pengenalan Kepada Analisis Data Komputer dengan SPSS 16.0 for windows*. Venton Publishing (M) Sdn. Bhd.
- Fahy, J. (2000). The Resource-Based View Of The Firm: Some Stumbling-Blocks On The Road To Understanding Sustainable Competitive Advantage. *Journal of European Industrial Training*. 24 (2/3/4): 94-104
- Fauzana, I. (2007). Structural change of the agricultural sector: Analysis based on input-output tables. Working Paper, Department of Statistics Malaysia. Retrieved from [www.statistics.gov.my](http://www.statistics.gov.my) 27 January 2017
- Febrianti, R.A.M., and Ariffin, S.D.S. (2013). The Influence of Product Differentiation and Pricing Strategy on Customer value in Appreciating Traditional Batik. *International Journal of Innovations in Business* 2 (4): 395-415
- Foxon, T., Gross, R., Heptonstall, P., Pearson, P., and Anderson, D. (2007). Energy Technology Innovation: A Systems Perspective. Report for the Garnaut Climate Change Review. Imperial College London.
- Freeman, C., and Soete, L. (1997). *The Economics of Industrial Innovation*. The MIT Press.

- Giuliodori, D., and Stucchi, R. (2012). Innovation and job creation in a dual labor market: evidence from Spain. *Economics of Innovation and New Technology*, 21(8): 801-813
- Grant, R. M. (1991). The Resource-Based Theory Of Competitive Advantage: Implications For Strategy Formulation. *California Management Review* 33: 114-135
- Grossman, G.M., and Helpman, E. (1994). Endogenous Innovation In The Theory Of Growth. *The Journal of Economic Perspectives*. 8 (1): 23-44
- Gujarati, D.N. (2006). *Essentials of Econometrics*. Third Edition. McGraw Hill
- Gunday, G., Ulusoy, G., Kilic, K., and Alpkan, L. (2011). Effects of Innovation Types on Firm Performance. *Int. J. Production Economic*. 133: 662-676
- Haber, S., and Reichel, A. (2005). Identifying performance measures of small ventures – The case of the tourism industry. *Journal of Small Business Management*, 43(3): 257-286. Retrieved from <http://dx.doi.org/10.1111/j.1540-627X.2005.00137.x> 14 August 2017
- Hagedoorn, J. (1996). Innovation and Entrepreneurship: Schumpeter Revisited. *Industrial and Corporate Change*. 5 (3): 883-896
- Hairuddin, H., Noor, N.A.M., and Malik, A.M.A. (2012). Why do Microenterprise Refuse to Use Information Technology: A Case of Batik Microenterprise in Malaysia. *Procedia-Social Behavioral Science* 57: 494-502
- Hall, B.H., and Kramakz, F. (1998). Effects Of Technology and Innovation on Firm Performance, Employment, and Wages. *Economics of Innovation and New Technology*: 99-108
- Hall, B.H., Lotti, F., and Mairesse, J. (2009). Innovation and Productivity in SMEs: Empirical Evidence for Italy. *Small Business Economics* 33 (1): 13-33
- Hamelin, A. (2013). Influence of family ownership on small business growth: Evidence from French SMEs. *Small Bus. Econ*. 41: 563-579.
- Hariadi, Y., Lukman, M., and Haldani, A. (2007). Batik Fractal: from traditional art to modern Complexity. Proceeding for *Generative Art X*, Milan Italia.
- Harrison, R., Jaumandreu, J., Mairesse, J., and Peters, B. (2014). Does innovation stimulate employment? A firm-level analysis using comparable micro-data from four European countries. *International Journal of Industrial Organization* 35: 29-43

- Hartono, A. (2013). Investigating Market Orientation—Business Performance Relationships in the Yogyakarta (Indonesia) Batik Family Firms. *International Journal of Marketing Studies* 5 (5): 3-40
- Hassan, A.S. (2002). Penggunaan Bahan Pewarna Alam Semulajadi Dalam Proses Pengajaran dan Pembelajaran Batik di Studio Batik UPSI. Proceedings from *Seminar Batik:Ekspresi, Eksplorasi, dan Komunikasi*. Institut Kraf Negara, Perbadanan Kemajuan Kraftangan Malaysia, pp. 20-26
- Hedfi-Khayati, L., and Zouaoui, M. (2013). The Impact of Innovation on the Performance of Small and Medium Manufacturing Enterprises: Evidence from Malaysia. *Journal of Innovation Management in Small & Medium Enterprise*, Vol. 2013. Retrieved from <http://www.ibimapublishing.com/journals> Article ID 885666. DOI: 10.5171/2013.885666. 26 December 2014
- Henley, A. (2005). Job Creation by the Self-Employed: The Roles of Entrepreneurial and Financial Capital. *Small Business Economics* 25 (2): 175-196
- Hoq, M.Z., Che ha, N., and Said, S.M. (2009). SMEs in the Malaysian economy. *International Journal of Marketing Studies* 1(2): 3-17
- Hubacek, K., and Sun, L. (2001) A scenario analysis of China's land use and land cover change: incorporating biophysical information into input-output modeling. *Structural Change and Economic Dynamics* 12: 367–397.
- Ichou, A. (2010). Modelling the Determinants of Job Creation: Microeconomic Models Accounting for Latent Entrepreneurial Ability. EIM Research Reports. Scientific Analysis of Entrepreneurship and SMEs.
- Innovation Report 2014. Department for Business Innovation and Skills, UK.
- Ismail, T., Wiyantoro, L.S., Meutia, and Muchlish, M. (2012). Strategy, Interactive Control System and National Culture: A Case Study of Batik Industry in Indonesia. International Congress on Interdisciplinary Business and Social Sciences 2012. *Procedia Social and Behavioral Sciences* 65: 33-38
- Ismail, W.N.S., Mokhtar, M.Z., and Ali, A. (2013). Design Activities and the Difference Level of Sales and Profits Performance of the Batik SMEs in Malaysia. *International Review of Management and Business Research* 2 (2): 627-642.
- Iwamoto, H., and Takahashi, M. (2015). A Quantitative Approach to Human Capital Management. Global Conference on Business & Social Science-2014, GCBSS-2014, 15th & 16th December, Kuala Lumpur. *Procedia-Social and Behavioral Sciences* 172: 112-119
- Janssen, F. (2003), "Determinants of SME's Employment Growth Relating to the Characteristics of the Manager", Working Paper 93/03, ESPO/IAG. Retrieved from <https://www.uclouvain.be/cps/ucl> 14 January 2015

- Jensen, M.C. (1986). Agency costs of free cash flow, corporate finance and takeovers. *American Economic Review*, 76(2): 323-330.
- Jensen, M. C., and Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics* 3: 305-360.
- Jimenez, D.J., and Valle, R.S. (2011). Innovation, Organizational Learning and Performance. *Journal of Business Research* 64: 408-417
- Johannessen, J.A., Olsen, B., and Lumpkin, G.T. (2001). Innovation as newness: what is new, how new, and new to whom?. *European Journal of Innovation Management* 4 (1): 20-31
- Jong, J.P.J.D., and Vermeulen, P.A.M. (2006). Determinants of Product Innovation in Small Firms: A Comparison Across Industries. *International Small Business Journal* 24 (6): 587-609
- Kamaruddin, R., Rashid, Z.A., and Jusoff, K. (2008). An Input-output Analysis of Sources of Growth and Key Sectors in Malaysia. *Modern Applied Science* 2 (3): 94-109
- Karabulut, A.T. (2015). Effects of Innovation Types on Performance of Manufacturing Firms in Turkey. *Procedia-Social and Behavioral Science* 195: 1355-1364
- Khan, M.W.J., and Khaliq, M. (2014). An Overview of Small and Medium Enterprises in Malaysia and Pakistan: Past, Present and Future Scenario. *Business and Management Horizons* 2 (2): 38-49
- Kheng, J.N.S. (2002). The Application of Other Various Textiles Techniques. Proceedings from *Seminar Batik:Ekspresi, Eksplorasi, dan Komunikasi*. Institut Kraf Negara, Perbadanan Kemajuan Kraftangan Malaysia, pp. 31-35, 2002
- Kim, K.Y., and Patel, P.C. (2017). Employee ownership and firm performance: A variance decomposition analysis of European Firms. *Journal of Business Research* 70: 248-254
- Krevitsky, N. (1964). The Art of Batik Today. *Art Education* 17 (8): 33-35
- Kritikos, A.S. (2014). Entrepreneurs And Their Impact On Jobs And Economic Growth. IZA World of Labor. doi: 10.15185/izawol.8
- Kurz, H.D. (2008). Innovations and Profits Schumpeter and The Classical Heritage. *Journal of Economic Behavior & Organization* 67: 263-278

- Kwon, C.W., and Chun, B.G. (2011). Relationship regarding the demand for labor between domestic temporary and foreign workers: Korean case. *Japan and the World Economy* 23 (4): 240-245
- Lachenmaier, S., and Rottmann, H. (2006). Employment Effects of Innovation at Firm level. IFO Working Paper No. 27. Institute For Economic Research at the University of Munich
- Lau, J.Y.F. (2011). *An Introduction to Critical Thinking and Creativity: Think More, Think Better*. Wiley. Retrieved from <http://www.hostgator.co.in/files/writeable/uploads/hostgator12628/file/introductiontocriticalthinkingandcreativity.pdf> 14 January 2015
- Lawless, M. (2013). Age or Size? Determinants of Job Creation. Research Technical Paper 2/RT/13. Central Bank of Ireland. Retrieved from <https://www.centralbank.ie/> 14 January 2015
- Laws of Malaysia, Act 222 Perbadanan Kemajuan Kraftangan Malaysia Act 1979, Incorporating all amendments up to 1 January 2006. Published by The Commissioner of Law Revision, Malaysia Under The Authority of The Revision of Laws Act 1968.
- Le, Thi Phuong Vy, and Phan Thi Bich, Nguyet (2017). Capital Structure and Firm performance: Empirical evidence from a developing country. *Research in International Business and Financ.* Retrieved from <http://dx.doi.org/10.1016/j.ribaf.2017.07.0> 31 July 2017
- Lee, I.H., and Marvel, M.R. (2014). Revisiting the entrepreneur gender-performance relationship: a firm perspective. *Small Bus. Econ.* 42: 769-786
- Leiponen, A. (2000). Competencies, Innovation and Profitability of Firms. *Economics of Innovation and New Technology* 9: 1-24
- Lillethun, A. (2004). Javanese Effects: Appropriation of Batik and Its Transformations in Modern Textiles. Proceedings for Textile Society of America Symposium. Retrieved from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1431> 13 June 2015
- Lin, L.C. (2007). *Batik: Creating an Identity*. National Museum Singapore and Editions Didier Millet.
- Löff, H., and Heshmati, A. (2006). On the relationship between innovation and performance: A sensitivity analysis. *Economics of Innovation and New Technology*. 15(4/5): 317-344
- López-Claros, A. The Innovation for Development Report 2010–2011: Innovation as a Driver of Productivity and Economic Growth. Palgrave Macmillan, New York.

- Lurweg, M., Oelgemöller, J., and Westermeier, A. (2010). Sectoral Job Effects of Trade: An Input-Output Analysis for Germany. CAWM Discussion Paper No 19. Retrieved from [https://www.wiwi.uni-muenster.de/cawm\\_dp19.pdf](https://www.wiwi.uni-muenster.de/cawm_dp19.pdf) 27 January 2015
- Magoutas, A.I., Papadogonas, T.A., and Sfakianakis, G. (2012). Market Structure, Education and Growth. *International Journal of Business and Social Science* 3 (12): 88-95
- Malaysian Handicraft Annual Report 2009. Malaysia Handicraft Development Corporation. Retrieved from [www.kraftangan.gov.my](http://www.kraftangan.gov.my) 10 November 2014
- Malaysian Handicraft Annual Report 2010. Malaysia Handicraft Development Corporation. Retrieved from [www.kraftangan.gov.my](http://www.kraftangan.gov.my) 10 November 2014
- Malaysian Handicraft Annual Report 2011. Malaysia Handicraft Development Corporation. Retrieved from [www.kraftangan.gov.my](http://www.kraftangan.gov.my) 10 November 2014
- Malaysian Handicraft Annual Report 2012. Malaysia Handicraft Development Corporation, retrieved from [www.kraftangan.gov.my](http://www.kraftangan.gov.my) 10 November 2014
- Malaysian Handicraft Annual Report 2013. Malaysia Handicraft Development Corporation. Retrieved from [www.kraftangan.gov.my](http://www.kraftangan.gov.my) 27 January 2016
- Malaysian Handicraft Annual Report 2014. Malaysia Handicraft Development Corporation. Retrieved from [www.kraftangan.gov.my](http://www.kraftangan.gov.my) 27 January 2016
- Manan, D.I.M., and Jan, N.M. (2010). Do Resources Contribute to Firms' Performances? Exploring Batik Industry in Malaysia. *International Review of Business Research Papers* 6(3): 189-204. Retrieved from <http://www.irbrp.com/static/documents/August/2010/15.%20Dewi.pdf> 23 June 2013
- Massis, A.D., Kotlar, J., Campopiano, G., and Cassia, L. (2015). The Impact of Family Involvement on SMEs' Performance: Theory and Evidence. *Journal of Small Business Management* 53(4): 924-948
- Mazumder, M.N.H., Ahmed, E.M., and Al-Amin, A.Q. (2009). Does Tourism Contribute Significantly to the Malaysian Economy? Multiplier Analysis Using I-O Technique. *International Journal of Business and Management* 4(7): 146-159. Retrieved from DOI: <http://dx.doi.org/10.5539/ijbm.v4n7p146> 27 January 2015
- Meutia (2013). Entrepreneurial Social Competence and Entrepreneurial Orientation to Build SME's Business Network and Business Performance. *International Journal of Social Science and Humanity* 3 (4): 381-385



- Meutia and Ismail, T. (2012). The Development of Entrepreneurial Social Competence And Business Network to Improve Competitive Advantage And Business Performance of Small Medium Sized Enterprises: A Case Study of Batik Industry In Indonesia. *Procedia - Social and Behavioral Sciences* 65: 46 – 51.
- Mills, J., Platts, K., and Bourne, M. (2003). Applying Resource-based Theory: Methods, Outcomes and Utility for Managers. *International Journal of Operations and Production Management* 23 (2): 148-166
- Minimum Wage Order 2012. Federal Government Gazette, P.U. (A) 214. Attorney General's Chambers.
- Mokhtar, M.Z., and Ismail, W.N.S.W. (2012). Marketing Strategies and the Difference Level of Sales and Profits Performance of the Batik SMEs in Malaysia. *International Journal of Business and Management* 7(23): 96-111. Retrieved from DOI: <http://dx.doi.org/10.5539/ijbm.v4n23p96> 23 June 2013
- Moore, S.B., and Manring, S.I. (2009). Strategy Development in Small and Medium Sized Enterprises For Sustainability and Increased Value Creation. *Journal of Cleaner Production* 17: 276-282
- Morone, P., and Testa, G. (2008). Firms Growth, Size And Innovation An Investigation Into The Italian Manufacturing Sector. *Economics of Innovation and New Technology* 17(4): 311-329
- Morrissey, K., and O' Donoghue, C. (2013). The role of the marine sector in the Irish national economy: An input–output analysis. *Marine Policy* 37: 230-238
- Muda, M.S., Amin, W.A.A.W.M., and Sofian, A.H.M.A. (2011). Craft Entrepreneurs in Malaysia: Analysis of Relationship between Product Innovation, Business Commitment and Business Expansion. Proceedings from *Persidangan Kebangsaan Ekonomi Malaysia ke VI Jilid 2 PERKEM VI*. pp.208-217
- Nasir, W.M.N.W.M., Al Mamun, A., and Breen, J. (2017). Strategic Orientation and Performance of SMEs in Malaysia. 1-13 DOI: 10.1177/2158244017712768. Retrieved from <http://journals.sagepub.com/doi/abs/10.1177/2158244017712768> 13 August 2017
- Ngatindriatun (2014). Analysis Of Batik Semarang Business Performance Using Scp (Structure-Conduct-Performance) Approach. *International Journal of Management and Sustainability* 3(4): 225-233
- Ninth Malaysian Plan 2006-2010 (2006). Economic Planning Unit, Prime Minister's Department, Putrajaya, Percetakan Nasional Malaysia Berhad. Retrieved from <http://www.epu.jpm.my> 10 November 2014

- Noor, N.L.M., and Nordin, A. (2012). Requirements Elicitation for the Technology Conception of a Community Information System for the Indigenous Microenterprise: A Contextual Multi-Analysis Approach on Business and Community Requirements of Batik Making. *Electronic Journal Information Systems Evaluation* 15 (1): 102-115. Retrieved from [www.ejise.com/issue/download.html?idArticle=822](http://www.ejise.com/issue/download.html?idArticle=822) 12 December 2014
- Nordin, R., and Bakar, S.S.A. (2013). Malaysian Batik Industry: Protecting Local Batik Design by Copyright and Industrial Design Laws. *International Journal of Business and Society* 13 (2): 117 – 132.
- O'Regan, N., and Ghobadian, A. (2004). The Importance Of Capabilities For Strategic Direction And Performance. *Management Decision* 42 (2): 292 – 313
- Oberhofer, H., and Vincelette, G.A (2013). Determinants of Job Creation in Eleven New EU Member States Evidence from Firm Level Data. Policy Research Working Paper 6533. The World Bank, Europe and Central Asia Region, Poverty Reduction and Economic Management Department. Retrieved from <http://documents.worldbank.org/curated/en/664991468233091615/pdf/WPS6533.pdf> 14 January 2015
- OECD (2000). A New Economy? The Changing Role of Innovation and Information Technology in Growth: Information Society. Retrieved from <http://books.google.com.my> 15 November 2014
- OECD and European Communities (2005). Oslo Manual: Guidelines For Collecting and Interpreting Innovation Data, Third edition. OECD/European Communities. Retrieved from <http://ec.europa.eu/eurostat/> 15 November 2014
- Okpara, F.O. (2007). The Value of Creativity and Innovation in Entrepreneurship. *Journal of Asia Entrepreneurship and Sustainability* III (2): 81-93
- Ong, E .(2013). Sub-Regions' Report South East Asia. Report For South-East Asia Region (Senior Vice President, S.E.Asia). Retrieved from <http://wccapr.org>
- Osman, Z.A. (2002). Contemporary Batik in Malaysia. Proceedings from *Seminar Batik:Ekspresi, Eksplorasi, dan Komunikasi*. Institut Kraf Negara, Perbadanan Kemajuan Kraftangan Malaysia. pp. 12-15
- Park, J.Y. (2007). The supply-driven input–output model: a new reinterpretation and extension. Paper Presented at 46th Annual Meeting of the Western Regional Science Association, Newport Beach, CA, February 21–24.
- Pasban, M., and Nojedeh, S.H. (2016). A Review of the Role of Human Capital in the Organization. 3rd International Conference on New Challenges in Management and Organization: Organization and Leadership, 2 May 2016, Dubai, UAE. *Procedia - Social and Behavioral Sciences* 230: 249 – 253

- Peck, J.F., Makepeace, G., and Morgan, B. (2006). Growth and Profitability of Small and Medium sized Enterprises: Some Welsh Evidence. *Regional Studies* 40 (4): 307-319.
- Pemakaian Pakaian Batik Malaysia oleh Pegawai Awam Pada Hari Khamis, Surat Pekeliling Perkhidmatan Bilangan 1 Tahun 2008, Kerajaan Malaysia, JPA(S)TT. 193/37 Klt.5(38)
- Pianta, M., and Vaona, A. (2007). Innovation and Productivity in European Industries. *Economics of Innovation and New Technology* 16 (7): 485-499
- Potecea, V., and Cebuc, G. (2010). The Importance Of Innovation In International Business. The Annals of The "Ștefan cel Mare" University of Suceava. Fascicle of The Faculty of Economics and Public Administration. Vol. 10, Special Number. 157-161.
- Racela, O.C. (2014). Customer orientation, innovation competencies and firm performance: A proposed conceptual model. *Procedia-Social and Behavioral Science* 148: 16-23.
- Rajauddin, M.R., and Alias, F. (2010). Tahap Pengurusan Perniagaan Dalam Industri Kecil dan Sederhana (IKS) Pengusaha Batik Di Daerah Kota Baharu. Retrieved from [www.eprints.utm.my/10511/](http://www.eprints.utm.my/10511/) 23 June 2014
- Redzuan, M., and Aref, F. (2009). Barriers and Opportunities in the Development of Rural Industries: A Case Study of Silverware and Batik Production in Kelantan, Peninsular Malaysia. *J. Agric. & Environ. Sci* 6(2): 196-202. Retrieved from [http://www.idosi.org/aejaes/jaes6\(2\)/11.pdf](http://www.idosi.org/aejaes/jaes6(2)/11.pdf) 14 December 2014
- Redzuan, M., and Aref, F. (2009). Path-analysis Model of the Development of Handicraft (Batik) Industries in Kelantan, Malaysia. *Journal of American Science* 5(8): 31-39. Retrieved from [http://www.jofamericanscience.org/journals/am-sci/am0601/17\\_1099\\_Development\\_am0601.pdf](http://www.jofamericanscience.org/journals/am-sci/am0601/17_1099_Development_am0601.pdf) 14 December 2014
- Redzuan, M., and Aref, F. (2011). Constraints and Potentials of Handicraft Industry In Underdeveloped Region Of Malaysia. *African Journal of Business Management*. 5(2): 256-260. Retrieved from <http://academicjournals.org/journal/AJBM/article-full-text-pdf/4B572AC15919> 14 December 2014
- Report on the Annual Survey of Manufacturing Industries 2013-2015, Department of Statistic Malaysia. Retrieved from [www.statistics.gov.my](http://www.statistics.gov.my)
- Rijkers, B., Arouri, H., Freund, C., and Nucifora, A. (2014). Which Firms Create The Most Jobs IN Developing Countries? Evidence From Tunisia. *Labour Economics* 31: 84-102.

- Robinson, R. (2001). *Creative Batik*. Search Press Limited
- Rosli, M.M., and Mahmood, R. (2011). Human Resource Management And The Performance Of Selected Small And Medium Manufacturing Enterprises. *Proceedings of The 1st International Conference on Information Systems For Business Competitiveness (ICISBC) 2011*: 330-336
- Saari, M.Y. (2014). *Input-output Analysis: Foundations and Applications For Policy Analysis in Malaysia*. University of Malaya Press
- Saari, M.Y., Alias, E.H., and Chik, N.A. (2013). The Importance of the Agricultural Sector to the Malaysian Economy: Analyses of Inter-Industry Linkages. *Pertanika J. Soc. Sci. & Hu.* 21 (S): 173 – 188
- Saleh, A.S., and Ndubisi, N.O. (2006). SME Development in Malaysia: Domestic and Global Challenges. Working Paper 06-03, Department of Economics, University of Wollongong. Retrieved from <https://core.ac.uk/download/pdf/7141854.pdf> 27 June 2015
- Samah, A.J.A (1990). Batik: Sejarah dan Keistimewaan Tekniknya. *Akademika* 37: 73-90.
- Sauian, M.S., Kamarudin, N., and Rani, R.M. (2013). Labor Productivity of Services Sector in Malaysia: Analysis Using Input-Output Approach. International Conference on Economics and Business Research 2013. *Procedia Economics and Finance* 7: 35-41
- Selman, J. (1989). Leadership and Innovation: Relating to Circumstances and Change. Retrieved from [www.innovation.cc/discussion-papers/selman.pdf](http://www.innovation.cc/discussion-papers/selman.pdf) 29 November 2015
- Shuib, A., and Nor, N.A.M. (1989). Analisis Permintaan Pelancongan di Malaysia. *Pertanika* 12(3): 425-432
- Sledzik, K. (2013). Schumpeter's View on Innovation and Entrepreneurship. Management Trends in Theory and Practice, (ed.) Stefan Hittmar, Faculty of Management Science and Informatics, University of Zilina & Institute of Management by University of Zilina, 2013. Retrieved from [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2257783](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2257783) 20 January 2015
- SME Annual Report 2011/2012. Economic Census 2011: Profile of SMEs. Retrieved from [www.smecorp.gov.my](http://www.smecorp.gov.my)
- SME Annual Report 2011/2012. Redefining the Future. National SME Development Council, SME Corporation Malaysia. Retrieved from [www.smecorp.gov.my](http://www.smecorp.gov.my)

SME Annual Report 2013/2014. Transitioning for Productivity-led and innovation-driven growth. National SME Development Council, SME Corporation Malaysia. Retrieved from [www.smecorp.gov.my](http://www.smecorp.gov.my)

SME Annual Report 2014/2015, One Business One Community, National SME Development Council, SME Corporation Malaysia. Retrieved from [www.smecorp.gov.my](http://www.smecorp.gov.my)

Sofian, A. H. M.A., and Azman, C. M. (2010). The contribution of heritage product toward Malaysian Tourism Industry: A case of Eastern Coastal Peninsular Malaysia. *International Journal of Human Sciences*, 7 (2), pp. 346-357

Tavassoli, S., and Karlsson, C. (2015). Innovation strategies and firm performance: Simple or complex strategies. *Economics of Innovation and New Technology* DOI:10.1080/10438599.2015.1108109

Tin, P.B. (2014). Decomposition Analysis for Labour Demand: Evidence from Malaysian Manufacturing Sector. *WSEAS Transactions on Business and Economics* 11, pp. 2-41. Retrieved from [www.wseas.org/multimedia/journals/economics/2014/a065707-119.pdf](http://www.wseas.org/multimedia/journals/economics/2014/a065707-119.pdf) 30 April 2015

Tokuda, A. (2005). The Critical Assessment of the ResourceBased View of Strategic Management: The Source of Heterogeneity of the Firm. *Ritsumeikan International Affairs* 3: 79-96

Utiti, C., Saari, M.Y., Hassan, A., and Ismail, T.H.T. (2015). Measuring the embodied waste among industries in Malaysia. *Procedia Environmental Sciences* 30: 228-231. Retrieved from [www.sciencedirect.com](http://www.sciencedirect.com) doi: 10.1016/j.proenv.2015.10.041

Voulgaris, F., Asteriou, D., and Agiomirgianakis, G. (2003). The Determinants of Small Firm Growth in the Greek Manufacturing Sector. *Journal of Economic Integration* 18(4): 817-836

Wagner, J. (1995). Firm Size and Job Creation in Germany. *Small Business Economics* 7 (6): 469-474

Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal* 5 (2): 171-80

Woldie, A., Leighton, P., and Adesua, A. (2008). Factors Influencing Small And Medium Enterprises (Smes): An Exploratory Study of Owner/Manager and Firm Characteristics. *Banks and Bank Systems* 3 (3): 5-13

Wooldridge, J.M. (2000). *Introductory Econometrics*. South-Western College Publishing

- Wright, P.M., Dunford, B.B., and Snell, S.A. (2001). Human resources and the resource based view of the firm. *Journal of Management* 27: 701-721
- Yang, Y., Zhang, B., Cheng, J., and Pu, S. (2015). Socio-economic Impacts of Algae-derived biodiesel Industrial Development in China: An Input-output Analysis. *Algal Research* 9: 74-81
- Yazdanfar, D., and Salman, K. (2012). Assessing Determinants on Job Creation at the Firm Level Swedish Micro Firm Data. *International Journal of Economics and Finance* 4 (12): 105 – 113
- Yojana, B., and Sansad, M. (2006). Status Study of Tribal Handicraft- An Option for Livelihood of Tribal Community in the States of Arunachal Pradesh Rajasthan, Uttaranchal and Chhattisgarh. Socio-Economic and Educational Development Society (SEEDS), New Delhi. Retrieved from [http://planningcommission.nic.in/reports/sereport/ser/stdy\\_thr.pdf](http://planningcommission.nic.in/reports/sereport/ser/stdy_thr.pdf) 22 December 2014
- Yunus, N.A. (2011). *Malaysian Batik: Reinventing a Tradition*. Yayasan Budi Penyayang Malaysia.
- Zehir, C., Gurol, Y., Karaboga, T., and Kole, M. (2016). Strategic Human Resource Management and Firm Performance: The Mediating Role of Entrepreneurial Orientation. 12th International Strategic Management Conference, ISMC 2016, 28-30 October 2016, Antalya, Turkey. *Procedia-Social and Behavioral Sciences* 235: 372-381
- Zhao, R. (2013). The role of the ocean industry in the Chinese national economy: An input-output analysis. National Marine Data & Information Service: Tianjin, China. Retrieved from <http://centerfortheblueeconomy.org/wp> 5 September 2013