

NEWSLETTER

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DOSM/BKS/4.2021/SERIES 20



VIRTUAL 2021

The involvement of the Department of Statistics, Malaysia at

63rd ISI WORLD STATISTICS CONGRESS 2021 - The Hague

"Statistics and Data Science Virtually 11"- 16" July 2021 for a Better World"

Day 2 (13 July 2021)

VOLUME 2

Interactive and inspiring statistical research findings and developments were shared by peers from around the world

Scientific programme of the day

LIVE Session

- 31 IPS Live, 9 SIPS
- 1 Plenary Talk
- 1 Live Workshop: Esri
- Women networking event

NON-LIVE Session

- 8 CPS Oral Presentations
- 16 IPS_Non-Live

Live Workshop: Esri Workshop

Esri, the global market leader in Geographic Information System (GIS) Software

The Use of ArcGIS

Used for census and survey work where it covers the process of pre-enumeration planning, field data collection and operation as well as dissemination of data







Live Women Networking Event



ISI Committee on Women in Statistics (CW-ISI)



Channel for female statisticians worldwide to have an informal set of discussion on topics that are of women's interest



To inspire each other as well as to make new connections and to renew existing relationships among professional partners







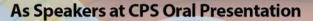






DOSM Contributions

To encourage aspiring young statisticians who are interested in writing papers related to official statistics to actively participate and experience the ISIWSC



Category: Pandemic







CPS's Poster



63rd ISI WORLD STATISTICS CONGRESS 2021 - The Hague

Virtually 11"- 16" July 2021 17:00 - 03:30 (Malaysia Time)

"Statistics and Data Science for a Better World"

POSTER

Contributed Paper Session (CPS)

Social Accounting Matrix: An initial study on Multiplier Analysis using Malaysia Compensation of Employees Statistics

This paper is an initial initiative on Multiplier Ana studied on Compensation of Employee (CE)rin Mala economy using Statistics from Social Accounting M. (SAM) 2015. Multiplier analysis is commonly studied to the control of the con









nors: Ms. Nurul Effa Farhana Halim Ms. Kon Mee Hwa









is study also will describe how far the pandemic crisis has impacted the playsia's labour demand in private sector as well as identifying the most ected sector and skill law.





























SOCIAL ACCOUNTING MATRIX: AN INITIAL STUDY ON MULTIPLIER ANALYSIS USING MALAYSIA COMPENSATION OF EMPLOYEES STATISTICS

Nurul Effa Farhana Halim and Kon Mee Hwa

Introduction

Malaysia, similar to other developing countries, has a national development plan that emphasis on accelerating economic growth. The absence of linkages between socioeconomic statistics and measurement issues in the labour market commonly occurs. These issues extended the needs on better indicators with social accounting multiplier statistics in matrix form. Production activities of each sector in the economy managed to create employment opportunities for a household which indirectly drives the country's economy. The production activities need raw materials and manpower in the process to produce final products for users. The objective of this paper is to study multiplier analysis of the compensation of employees using Malaysia statistics from the Social Accounting Matrix (SAM). Multiplier analysis is commonly studied by developed countries to identify the key economic driven sectors. This paper is an initial initiative on Multiplier Analysis studied on Compensation of Employee (CE) in Malaysia economy using Statistics from Social Accounting Matrix (SAM) 2015, which published by the Department of Statistics Malaysia (DOSM).

Methodology

The compensation of employee multiplier measures the total increase in compensation of employees in the Malaysia Economy resulting from an increase in total compensation of employees received by employees. Leontief inverse matrix has been employed in this analysis, where Leontief inverse matrix indicated coefficients (economic multipliers) that measure consecutive effects on the economy as a result of the initial increase in output of the production activity. The statistical techniques that applied in this study involving calculations on the coefficient of CE derivation, identity matrix creation, subtraction of identity matrix with the CE's coefficient and Leontief inverse matrix.

Analysis and Findings

Table 1: CE multiplier effect by sector, 2015

	Sectors					
	Agriculture	Mining & Quarrying	Manufacturin g	Construction	Services	
Urban	0.21	0.22	0.26	0.39	0.41	
Rural	0.10	0.04	0.06	0.09	0.09	
Total	0.31	0.27	0.32	0.48	0.50	

Table 2: CE multiplier effect by production activities, 2015

Production activities	Urban	Rural	Total
Crops, animal production and hunting	0.19	0.11	0.30
Forestry and logging	0.19	0.06	0.25
Fishing and aquaculture	0.18	0.06	0.24
Extraction of crude petroleum and natural gas	0.21	0.04	0.24
Mining of metal ores	0.34	0.05 !	0.39
Mining of coal and lignite	0.24	0.07	0.31
Other mining and quarrying	0.26	0.10	0.37
Food products	0.23	0.07 i	0.31
Beverages and tobacco products	0.22	0.05	0.27
Textiles, wearing apparel and leather products	0.29	0.05	0.34
Wood, furniture, paper products and printing	0.33	0.06	0.39
Petroleum, chemical and rubber products	0.21	0.04	0.25
Metal and other non-metallic mineral products	0.27	0.05	0.31
Electrical, electronic and optical products	0.24	0.04 ;	0.28
Transport equipment and other manufacturing	0.23	0.04	0.27
Construction of buildings	0.37	0.08	0.45
Civil engineering	0.37	0.09	0.47
Specialised construction activities	0.36	0.07	0.42
Utilities	0.23	0.05	0.28
Wholesale and retail trade	0.33	0.08	0.40
Food & beverage and accommodation	0.34	0.08	0.42
Transportation and storage	0.34	0.06	0.39
Information and communication	0.32	0.08	0.40
Finance	0.41	0.05 !	0.46
Real estate	0.24	0.04	0.29
Rental and leasing	0.33	0.04	0.37
Research and development	0.39	0.05 i	0.44
Business services	0.41	0.07	0.48
Education	0.68	0.20	0.88
Health	0.54	0.10	0.64
Government services	0.66	0.16	0.82
NPISHs	0.40	0.08	0.48
Other services activities	0.36	0.06	0.43

Table 1 shows the CE multiplier effect according to region categories by sectors, it revealed that highest total compensation of employees' multiplier effect in Malaysia is the services sector, 0.50. This result indicated that for every one (1) Ringgit Malaysia increase in the demand of services sector at national level, will resulting 0.50 Ringgit Malaysia rise on the compensation of employees.

The education service activities obtained highest CE multiplier for both urban and rural area with 0.68 and 0.20 respectively as shown in Table 2. This indicated that the education services activities generated large income to the employees in both areas.

Besides, the government services, health services and business services activities also have a high CE multiplier effect for the economy in an urban area, with the values of multiplier registered 0.66, 0.54 and 0.41 respectively. In rural area, the government services (0.16), crops, animal production and hunting activities (0.11) and health services activities (0.10) also contributed high CE multiplier effect.

Thus, the empirical result in this study indicated significant multiplier that impact and the most influencing CE in the Malaysia's economy are precisely driven by education services activities, which has highest CE multiplier effect of 0.88. Thus, this indicated that for every one (1) Ringgit Malaysia increase in the demand of education services at national level, will resulting 0.88 Ringgit Malaysia rise on the compensation of employees.

Conclusion

The econometric analysis approaches implemented in this study was in line with the effects of conventional economics assessment methodology by using the social accounting matrix framework. Based on the research findings, education services is the main component influencing the compensation of employees in Malaysia, it play an important role as an integral part of the economic infrastructure of a country and region in generating employment and output, attract earnings and contribute to national gross domestic product.

Selected References:

Accounting Matrix 2015. ISSN:2600-7363, Department of Statistics Malaysia (DOSM). Putrajaya, Malaysia.

Rostasova, M. (2017). Economic Impact and Multiplier effect of University on Economic Development of the Host Region.

Univer Round











al Accounting Matrices and SAM-based Multiplier Analysis. Department of Economics, University of Warwick, United Kingdom

POSTER 2



THE IMPACT OF COVID-19 ON TOURISM INDUSTRY IN LANGKAWI, KEDAH

Hamimah Mohd Shah¹; Nur Azmina Ahmad Zuhkhori¹; Nur Adilah Hassan¹; Suzana Abu Bakar¹



INTRODUCTION

The COVID-19 pandemic brought the entire tourism industry to a grinding halt as the government, along with its counterparts around the world, took measures to contain the spread by closing borders, causing massive job and revenue losses. Many hotels shuttered, while some travel agencies and businesses folded as their funds dried up. In 2020, Malaysia's economy contracted by 5.6 per cent from a growth of 4.4 per cent in the preceding year due to the restrictions on economic activity resulting from the containment measures in response to COVID-19 pandemic. Malaysia registered a total of 4.3 million international tourist arrival in 2020, down 83.4 per cent as compared to 26.1 million recorded in 2019. The report is as below:

ITEM/YEAR	2019	2020	GROWTH
Tourist Arrivals	26,100,784	4,332,722	-83.4%
Tourist Receipts	RM86.14 billion	RM12.69 billion	-85.3%
Per Capita Expenditure	RM3,300	RM2,928	-11.3%

Source: Tourism Malaysia (2020)

For Kedah, the district of Langkawi was the most affected as tourism industry has the main contribution in the economic activities of the district. Langkawi Island, which is among Malaysia's premier tourist destinations reported the number of both domestic and international tourist arrivals to Langkawi has been increasing significantly before the pandemic. However, in 2020, Langkawi Island reported tourist arrivals of 1.80 million as compared to 3.92 million in year 2019.

METHODOLOGY

The methodology technique used for this study is to imply secondary information from various sources published by the government. Secondary data is used to give a better overview and understanding of the issues under study and these are gathered from various state and district publications. The time series data of 2018 to 2020 was from the Department of Statistics Malaysia, Tourism Malaysia and Langkawi Development Authority (LADA). This study conducts a descriptive method using the secondary data.

OBJECTIVE

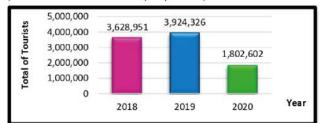
The objective of this paper is to examine the future impact of COVID-19 on tourism industry in Langkawi due to Movement Control Order (MCO).

¹Department of Statistics Malaysia, Kedah RESULTS

(a) Impact of COVID-19 to Tourist Arrival

In Langkawi Island, the huge drop phenomena happened when the border was closed due to the enforcement of the MCO. LADA's data was obtained through the number of

visitor arrivals at the contact points of Langkawi covering the Jetty Complex, Cruises, Yachts, Airport and Langkawi Port. The tourist arrivals drop dramatically and the situation has become very challenging in 2020. LADA reported tourist arrivals totaling of 1.8 million in year 2020 as compared to 3.92 million in 2019 (-54 per cent) as shown below:



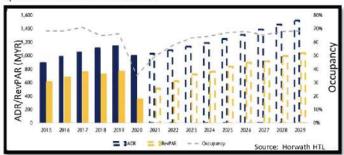
Source: Langkawi Development Authority (LADA)

HOTEL

(b) Impact of COVID-19 to Hotel Industry

According to Kedah Tourism Manager, since the COVID-19 outbreak and enforcement of the MCO in March 2020,

many tourism operators in the state had to shut down as they could not afford to sustain their businesses due to financial difficulties. Referring to the Market Report - March 2021 on Performance Outlook 2015-2029 by Horwath HTL as shown below:

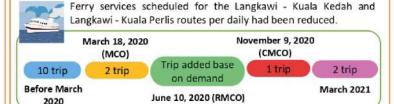


(c) Impact of COVID-19 to Aviation Industry and Ferry Transport

Aviation Industry & Ferry Transport also required to comply with the government directive of enforcing the MCO. In 2020, a significant decline of aircraft movements (-67.2 per cent) and passengers (-53.1 per cent) at Langkawi International Airport. The report for 2018 -2020 as below:

YEAR	PASSENGER	GROWTH (%)	AIRCRAFT MOVEMENT	GROWTH (%)
2018	2,735,703		37,528	-
2019	2,946,189	7.7	44,599	18.8
2020	967,512	-67.2	20,915	-53.1

Source: Civil Aviation Authority of Malaysia (2020)



(d) Malaysia's Economic Stimulus Package



The main highlights of the PRE2020 such as tax incentives, financial relief in restructuring of loan or postponement of repayments to banks, etc. and discount on electricity bills to reduce the operating cost had been offered in order to ease Malaysia's tourism industry players.

CONCLUSION

Malaysian government had imposed the MCO, travel restrictions and banned tourists from around the world since March 18, 2020 in order to flatten the curve. Most of the tourism industry started to re-operate since June 10, 2020 when the RMCO was implemented. The huge and adversely impacted the Malaysia's tourism industry significantly with a negative growth in the number of tourist arrivals, occupancy rate of accommodation and transportation to the Langkawi Island. The Malaysian government announcements of six assistance packages, namely PRIHATIN, PRIHATIN SMEs, PENJANA, Kita PRIHATIN, PERMAI and PEMERKASA were expected to ensure the sustainability of the Malaysian's tourism industry.











POSTER 3

Coronavirus (COVID-19): The impact on the Malaysia's labour demand situation in formal private sector

Malaysian Bureau of Labour Statistics (MBLS), Department of Statistics, Malaysia Rabiatul Adawiyah Rahim; Mohammad Faris Roslan; Nurul Syahirah Mohd Ali

Introduction

The COVID-19 pandemic that started in China in December 2019 had given negative impact to the social, economic and labour market conditions in Malaysia. As a response to the outbreak of COVID-19 which found its way to Malaysia on 24 January 2020, Malaysia's government has implemented Movement Control Order (MCO) starting 18 March 2020 in order to curb the spread of the virus. However, this lead to a partial shutdown of the economy since many businesses are temporarily closed. This crisis will likely have severe effect for the labour market demand especially in private sector.

Thus, this study aims to focus on the **impact of COVID-19 in Malaysia's labour demand in formal private sector** based on the findings of Quarterly Employment Statistics published by Department of Statistics Malaysia and how far the pandemic crisis has impacted the Malaysia's labour demand in private sector as well as identifying the most affected sector and skill level.

Methodology

Quarterly Employments Statistics gives an overview of labour demand in Malaysia for the whole economic sectors. These statistics are based on the Quarterly Employment Survey which is conducted on formal private sector establishments using establishment approach, covering establishments in the category of large, medium, small and micro. All economic activities are based on Malaysia Standard Industrial Classification (MSIC) 2008 Version 1.0. Then it's classified by five (5) main economic sectors namely Agriculture, Mining & Quarrying, Manufacturing, Construction and Services.

The skills category are occupation coverage based on nine categories according to Malaysia Standard Classification of Occupation (MASCO) 2013 which regrouped into three level of skills which are Skilled, Semi-skilled and Low-skilled.

References

Department of Statistics Malaysia (2020), Employment Statistics. Putrajaya, Malaysia

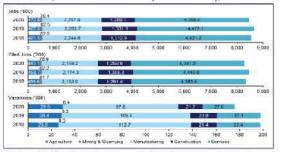
University of Vienn, How Does the COVID-19 Crisis Affect Labor Demand? An Analysis Using Job Board Data from Austria. Vienna, Austria

Results

Chart 1: Jobs, Filled Job and Vacancies, Q1 2019 - Q4 2020



Chart 3: Jobs, Filled Jobs and Vacancies by Economic Activity, 2018 - 2020



During 2020, all sectors recorded a **decrease** in number of filled jobs as compared to last year. However, **Services sector** has the highest decline of filled jobs, dropped 99 thousand from 2019 (4.440 million) to 4.341 million jobs.

In the same period, the number of jobs vacancies showed a different situation with a slower growth for two sectors which are Agriculture and Mining & Quarrying sectors. [Chart 3]

Total jobs (filled jobs + job vacancies) in the private sector in Q2 2020 **declined** 184 thousand from Q1 2020 to 8.383 million. During the same period, filled jobs and vacancies rate also **declined**. This is the result of MCO that government implemented from 18 March 2021 until late April. During Conditional Movement Control Order (CMCO) in early May, the number of jobs vacancies **gradually increased** from 1.9 per cent in Q1 2020 to 2.1 per cent in Q3 2020.

As compared to 2019, the number of jobs in 2020 **declined** by 204 thousand to 8.457 million. The decrease in jobs was due to decline of both number of filled jobs and vacancies in 2020. **[Chart 1]**

Chart 2: Jobs, Filled Jobs and Vacancies by Skill, 2018 - 2020



In 2020, the number jobs in all skills category registered a **decrease** but **semi-skilled category** shows the highest decline of 129 thousand jobs as against 2019 to 5.279 million jobs. The rate of filled jobs for this category was 98.1 per cent (5.181 million), while the vacancies rate was 1.9 per cent (98 thousand job vacancies). **[Chart 2]**

Discussion and Conclusion

In conclusion, labour demand situation for all sectors were affected by this crisis especially in **Services sector** as the non-essential services were mostly in **Services sector**. Most of companies take steps to reduce their costs by reducing their employees. Based on this study, **the most affected skill was semi-skilled** category followed by low-skilled.

To conclude, the post-crisis was indeed challenging to the labour market due to the impact of the third wave of COVID-19 and re-imposition of the CMCO with stricter rules in selected areas of the country particularly in the last two months of 2020. Undoubtedly, the daily economic activities were adversely affected, especially for local businesses and small enterprises. Thus, with the launched of the Perlindungan Ekonomi dan Rakyat Malaysia (PERMAI) assistance package, it is hoped that the economy to be manageable and able to provide more opportunities for businesses to recover gradually in 2021 and subsequently create more jobs openings.











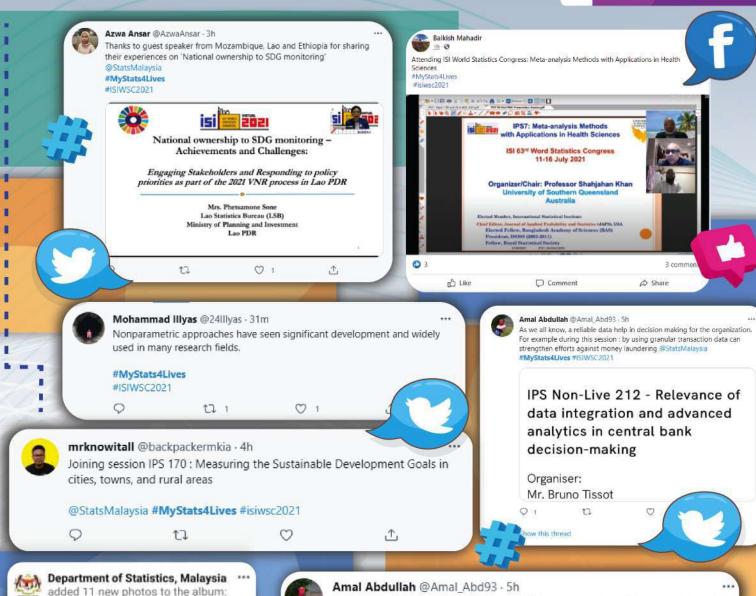




YOUR DATA IS OUR FUTURE

SOCIAL BUZZ@DOSM

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added 11 new photos to the album:

International Programmes 2021.

INTERNATIONAL PROGRAMME (Day-2@ISIWSC2021)

On the second day of ISI WSC 2021, the inspiring and interactive statistical research findings were shared by peers from around the world. Congratulations on your efforts and thank you for sharing your findings with us that are very beneficial for better understanding and allowing us to acquire new methods and ideas in expanding official statistics for decision making process. We also would like to show our appreciation to the networking events for women where they provide channel for global women to make new connections and renew existing relationships among professional partners. Thank you for this great platform. Hope to interact with international counterparts on the third day of the congress.

Stay tuned for the #ISIWSC2021 !!



It also can identify earlier about suspicious transactions. The more financial data are available, the better economic crime can be identified 👍 it was awesome method to prevent crime. Great knowledge @StatsMalaysia

#MyStats4Lives #ISIWSC2021









Mohammad Illyas @24Illyas - 11h

The IPS "How can we help ensure that official statistics training needs are met?" was good discussion that focus on training and professional development programs in official statistics.

#MyStats4Lives #ISIWSC2021



HajaMohd @HajaMohd3 - 4h

@StatsMalaysia Complementary indicators is possible to analyze particularities more broadly. Well done #MyStats4Lives #isiwsc2021













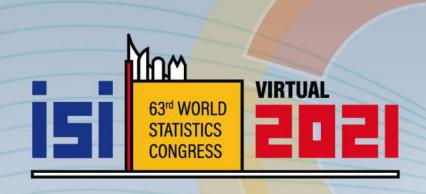












DOSM congratulates and appreciates all speakers for their fabulous efforts and willingness to share variety of informative findings that allowed delegates and participants to acquire new methods and ideas in improving the official statistics for decision-making process.

Congratulations









