

# **THE IMPACTS OF EAST COAST RAIL LINK (ECRL) PROJECT IN KOTA BHARU, KELANTAN**

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# The Impact of East Coast Rail Link (ECRL) Project in Kota Bharu, Kelantan

by

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2023

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## Abstrak

Kertas kerja ini menilai impak ekonomi, sosial dan alam sekitar dalam pelaksanaan projek Laluan Rel Pantai Timur (ECRL) di Kota Bharu, Kelantan. Projek besar itu memerlukan bajet kewangan yang besar yang menelan belanja RM75 bilion untuk melaksanakannya. Rangkaian rel itu melibatkan empat negeri di Semenanjung Malaysia yang terdiri daripada Kelantan, Terengganu, Pahang dan Selangor. Tanah hutan, hidupan liar dan hutan hujan akan terjejas melalui pelaksanaan projek ECRL. Adalah penting untuk mengetahui impak positif dan negatif projek ini kerana ia akan mempengaruhi masa depan Malaysia. Temu bual mendalam telah dijalankan dengan 10 orang peserta. Bukti ditemui dengan pengkodan manual untuk menganalisis data. Penemuan menunjukkan bukti kukuh mengenai kesan yang berlaku dalam projek. Kesan positif didapati dengan banyak kesan negatif dalam tiga aspek iaitu ekonomi, sosial dan alam sekitar. Ia membuktikan usaha kerajaan Malaysia dalam mencuba sedaya upaya untuk memaksimumkan impak positif dan meminimumkan kesan negatif yang melanda projek ini. Kekangan masa penyerahan kertas adalah had utama untuk mengumpul lebih banyak data yang boleh digunakan.



## Abstract

This paper evaluates the economic, social and environmental impacts in the implementation of East Coast Rail Line (ECRL) project in Kota Bharu, Kelantan. The big project required a large financial budget which cost RM75 billion to implement it. The rail network involved four states in Peninsular Malaysia which consist of Kelantan, Terengganu, Pahang and Selangor. Forest land, wildlife and rainforest will be affected through the implementation of the ECRL project. It's important to find out the positive and negative impacts of this project as it will influence Malaysia's future. In-depth interviews were conducted with 10 participants. Evidence was found by manual coding for analysing the data. Findings showed a strong evidence regarding the impacts which occurred in the project. Positive impacts were found with plenty of negative impacts in three aspects which were economic, social and environmental. It proves the effort of Malaysia government in trying their best to maximize the positive impact and minimize the negative impact that come across this project. Time constraints of the paper submission was the main limitation to collect more useable data.

## CHAPTER 1: INTRODUCTION

### 1.1 Background of the Study

The implementation of East Coast Rail Link (ECRL) project involved from Malaysia's west coast states of Selangor, Putrajaya and Negeri Sembilan to Malaysia's east coast states of Kelantan, Terengganu and Pahang has been a hot topic to be debating in the parliament of Malaysia where the opposition party from Pakatan Harapan criticises that the ECRL project is overpriced and unaffordable for Malaysia.

According to The Institute for Democracy and Economic Affairs (IDEAS), Malaysia (2020), the cost of ECRL project was reached RM65.6 billion when Barisan National was the ruling party, then it reduced to RM44 billion while Pakatan Harapan assumed power in 2018. However, the cost was revised again to RM50 billion when the ruling party Perikatan National after the Sheraton Move in February 2020. The latest costing per kilometre (km) was RM75.19 million which covered a total of 665km railway length. The cost per km is much higher compared with other China's Belt and Road Initiative (BRI) railway project. Furthermore, environmental impact will be occurred in this project too. It is potentially harm Malaysia's ecology and geological heritage which occurred in Titiwangsa's tropical rainforest ecosystem by the proposed route from Mentakab to Jelebu (Raj & PSM, 2019).

Although there are a few economic impact studies had been studied in detail, there is no attention had been paid to social impact and environmental impact. Thus, this study aimed to find out the impacts from multiple aspects which consist of economic, social and environmental aspects in the implementation of ECRL project.

## 1.2 Problem Statement

Overpriced of East Coast Rail Link (ECRL) project has been discussed from the politicians and public. Politicians from Pakatan Harapan had said Malaysia's budget is unaffordable to implementation the East Coast Rail Link (ECRL) project. Gunasegaram (2017) explained that ECRL project is economically not feasible for Malaysia. The massive cost of RM55 billion project is not affordable for Malaysia in current stage. Several renegotiation processes have been made from different ruling parties after the transition of power but whether Malaysia can afford the cost of the project is still remained unknown (ZAINUDDIN et al., 2022).

Besides the costing of ECRL project, it also brings impacts to Malaysia. The economic, social and environmental impacts were needed to be find out as it will influence the future of Malaysia. If the ECRL project failed spectacularly, the future of Malaysia will come along with much more negative effects. Malaysia will face challenges for paying the debt and Malaysian tax income will need to bare for the cost. While the environmental impact can't be moved back after the deforestation took place.

Thus, this study aims to explore the views and opinions of the potential users in Kota Bahru, Kelantan for the sweet and bitter of the economic, social and environmental impact that comes from the ECRL project. Qualitative methods such as interviews and collection of secondary data will be used to find out the answers.

## 1.3 Research Question

- I. How East Coast Rail Link (ERCL) project brings economic impact to Kota Bharu, Kelantan?

- II. How East Coast Rail Link (ERCL) project brings social impact to Kota Bharu, Kelantan?
- III. How East Coast Rail Link (ERCL) project brings environmental impact to Kota Bharu, Kelantan?

#### **1.4 Research Objectives**

- I. To evaluate the economic impact in the implementation of East Coast Rail Link (ERCL) project in Kota Bharu, Kelantan.
- II. To evaluate the social impact in the implementation of East Coast Rail Link (ERCL) project in Kota Bharu, Kelantan.
- III. To evaluate the environmental impact in the implementation of East Coast Rail Link (ERCL) project in Kota Bharu, Kelantan.

#### **1.5 Scope of the Study**

This study tends to focus the impact in economic, social, environmental aspects towards implementation of ECRL project in Kelantan. By linking Kota Bharu in Kelantan to Port Klang in Selangor, the ECRL, a standard gauge double-track railway connection infrastructure project, will connect Peninsular Malaysia's East and West Coasts. The government employees and citizens in Kelantan who will serve as the study's population will be interviewed for reference. By using this approach, the researcher will be able to determine how the community feels regarding the project's implementation in Kelantan in terms of economic, social and environmental factors.

## **1.6 Significance of Study**

The findings of this research will assist the community because one of Malaysia's key industries is transportation. ECRL project has the potential to significantly alter the community's use of technology for public transportation, as well as our economies' reliance and the transportation sector's environmental impact. In order to better understand the current preparedness level of ECRL in Kelantan, this study analyses the application of ECRL to community from the future perspectives of economic, social and environmental factors.

## **1.7 Definition of Term**

### **1.7.1 Impact**

Impact is a term that described an outcome of a particular situation positively and negatively. It is basically used a primary and secondary long-term effect after a development intervention and also can be used for measuring the short-term effect. The outcome of the development can be influenced directly or indirectly, intended or unintended (Belcher & Halliwell, 2021). This term will be discussed throughout the research proposal while in-depth explanation will be mentioned Chapter 2.

## CHAPTER 2: LITERATURE REVIEW

### 2.1 Introduction

This section will cover the themes and sub-themes. There were three themes in this study included economic impact, social impact, and environmental impact. This research study refers to previous studies that discussed the factors that influence public readiness to use the East Coast Rail Link (ECRL).

### 2.2 Economic Impact

Economic impact can be measured by the effect of a project or business on the specific area, and may include, but not be limited to the type of employment created, potential created, potential of the economy growth, saturation in a specific market or industry or employment in the particular location which can be from directly or indirectly (Law Insider Inc., n.d). As Dfid (2008) said, positive economic impact leads to economic growth. Economic growth creates job opportunities which can reduce unemployment rate. Human development existed during positive economic growth; expansion of substantive freedoms can be achieved through economic growth which can associated with improvement in living standards.

However, economic impact not just bringing positive effect but negative effect too. Siddique et al. (2016) urged public debt comes with negative and statistically significant effect towards GDP in both short and long term. Higher debt levels bring a negative effect on economic growth for debt-ridden countries as they need to use a large portion of their output to pay debts to lenders. When government debt levels beyond a

certain threshold level, negative economic impact will be happened, explained Reinhart and Rogoff (2010).

D. Knowles and Ferbrache (2016) examined that better connectivity by light rail can bring positive impact by attracting inward investment, influencing related area's property price generating fresh growth and widening labour market catchment areas. They proved that the land and property value have potential to be risen up. However, it may be a negative impact as the increment of property price will make more difficulties for low-income household to have the ability to own a property in the specific location. Referred to findings about high-speed rail transport from China, the connectivity between two locations helped to improve economic growth by the speed of labour and material transported through the rail transport.

Rodrigue (2020) mentioned, by having an efficient transport system, "just-in-time" concept can be further expanded for the productivity of production and distribution which can achieve a lower inventory level and better responses to shifting market conditions. The positive relationship between the efficiency of transport and targeted market can generate larger scale of production which can reduce the unit costs. Arndt et al. (2009) added that high construction and maintenance cost in rail transportation is an issue that need to be considered. It used to be highly dependent on government subsidies in some countries. It would be a negative impact if the rail transportation failed to reach the expected capacity of users using the public transport. Generally, economic contribution will be highlighted when environmental issues are needed to sacrifice and thus the environmental argument that needed to focus on will be weakening (Marsden, 2017).



## 2.3 Social Impact

Social impact cannot be measured, it can be considered as a side effect of a large phenomenon. It is normally mentioned in the process of technological advancement with a long-term effect. The term is related with the community of the intervention which involved in the movement of people that will be making changes after a certain period (Martino, 2019).

Burdge et al. (2003) explained social impact as the changes of methods involved the activities of people live, work, play, relate to one another, organise to meet their needs, and generally cope as members of society. Cultural impact also exists to change the norms, values, and beliefs that guide and rationalise peoples' cognition of themselves and their society.

Social impacts can be defined as any impact that caused people lives in different ways such as employment, income, public health and safety, access to services, and respect for fundamental rights, said CEPS (2010).

Rural area that hard to be reached would be benefited by implementation of light rail project. People can be more accessible after the development of rail transport in the area. It can be much more convenient for locals who doesn't have car for going a far destination by using the rail transport (D. Knowles & Ferbrache, 2016). Belal et al. (2020) urged investment in high-speed rail cannot be judged by the cost only, it benefits to user by providing comfortable, reliable, and safer mode of transport. Overall, it shorted door-to-door travelling time for traveller which brings good impact for society.

Moreover, it can be beneficial to society by adding an alternative for people who might not needed recently but needed in the future (Arndt et al., 2009). Accessibility



became widely accepted by publics as the government recognised transport as a social policy issue. Transportation system enables people to move around for participating in various activities between different places (Simpson, 2003).

## **2.4 Environmental Impact**

According to Abdallah (2017), environmental impacts directly bringing cause on either the natural or built environments, which leading to adverse consequences. The scholar added environmental impact cause changes which lead to adverse consequences on either the natural or built environments. There are three main elements must be measured such as air, water, and land. There are seven types of pollution which regarding to (1) air, (2) water, (3) soil, (4) light, (5) noise, (6) thermal, (7) radioactive. Some of the effects even disturbed the daily lifestyle of human being including human and animals due to unwanted sound or damage the existing built environment with potentially destructive vibrations.

The term of environmental impact is commonly used with the rise of recognition that has changed the nature, scale and implications of environmental change by human actions (Morgan, 2012).

Arndt et al. (2009) also discussed about rail transportation can bring positive impact to the environment. The electrically powered train consumes less energy than road vehicles with extremely low emissions compared to diesel or gasoline vehicles transit. Furthermore, additional of public transport can reduce congestion level, it can further reduce the use of fuel and emissions from road vehicles.

Antonson and Levin (2020) listed that building high-speed railways can affect the surrounding soil, air, and water environment, the landscape ecological system, and human health. According to Pridmore and Miola (2011), public acceptability of green motives and pro-environmental orientation were identified as playing a role in increasing the acceptability of measures.

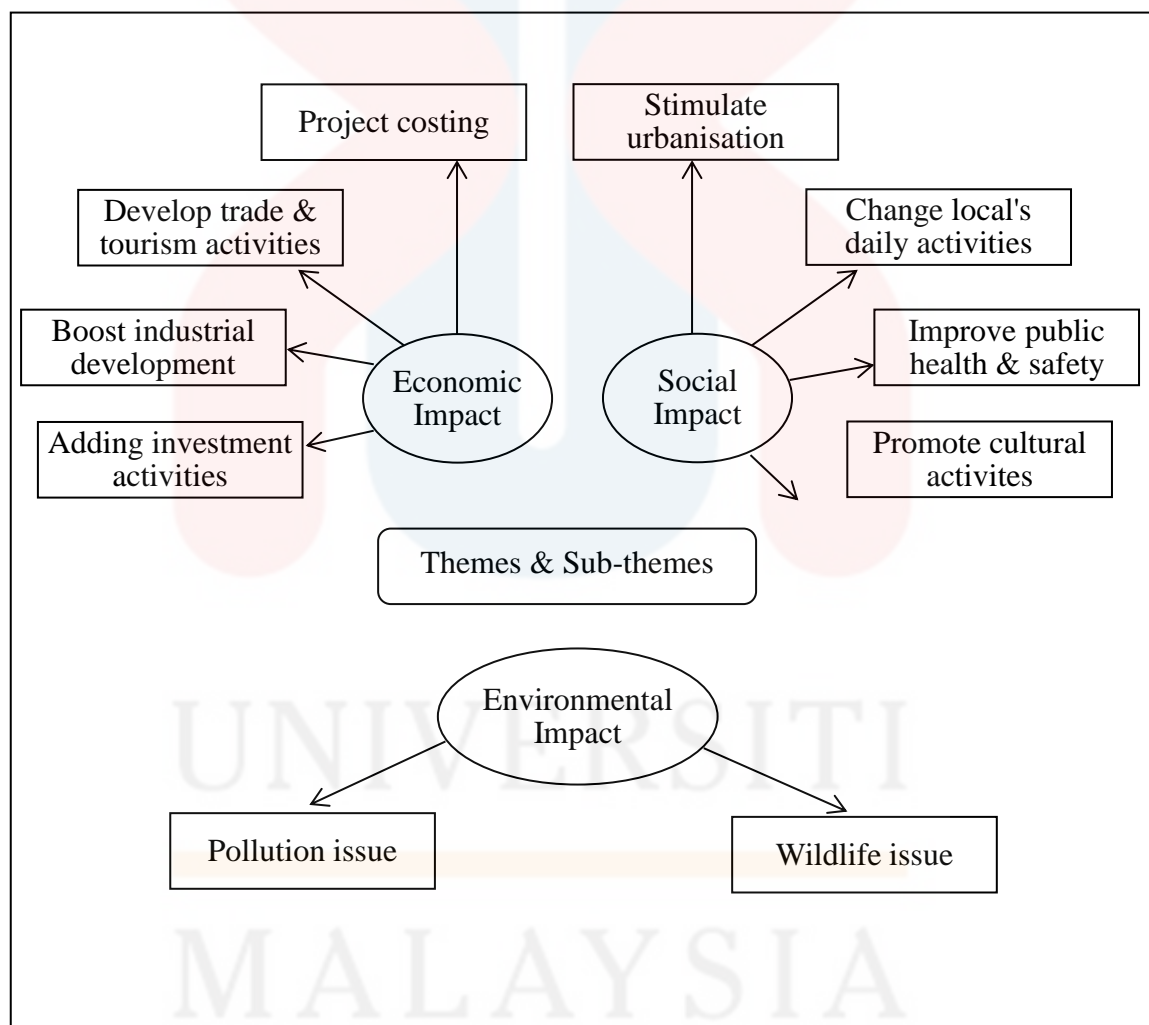


Figure 2.1: Categorizing the impacts in the implementation of ECRL project

## 2.5 Hypothesis Statement

H1: East Coast Rail Link (ERCL) project creates positive long-term economic impact for Kota Bharu, Kelantan.

H2: East Coast Rail Link (ERCL) project creates additional social benefits for Kota Bharu, Kelantan.

H3: East Coast Rail Link (ERCL) project creates more environmental issues in Kota Bharu, Kelantan.

## 2.7 Previous Study

Advocates of rail transit investment argue that rail transit promotes environmental sustainability and helps strengthen the economic viability of a city (Kahn, 2007). Though a fundamental issue with rail transit is frequently its inability to attract enough customers to reduce its high average costs (Winston & Maheshri, 2007). They emphasize that a rise in train patronage may result in a decline in the use of private vehicles and other modes of transportation. commuters save time and money as a result of less traffic congestion, while making urban travel safer by reducing the incidence of vehicle-related incidents. Through the “forward-looking announcement effect”, an improved rail system’s accessibility can affect property values before the accessibility really changes and even before any development has begun.

Tsutsumi and Seya (2008) analysed the dynamic shift in real estate prices using the Tsukuba Express line in Japan as a case study. The hedonic technique proposed by Rosen (1974) is applied in the standard method used to assess the effects of infrastructure

projects on property values. To estimate their model, they use a geostatistical approach. They compare the benefit estimates obtained using the geostatistical approach and a spatial econometric approach. Regardless of the method, they discovered advantages.

Kahn (2007) explored the role of local public goods improvements on communities near new train stations, looking at how community outcomes, such as house prices, change in treated areas (close to the rail line) versus those in control areas (distant from the line). He describes three types of treatment for areas that receive new rail access: no increase in rail access, a “Walk and Ride” station built close to a community, and a “Park and Ride” station built in a community where there is simple land for a carpark. Kahn discovers that in the long run, homes near a “Walk and Ride” facility experience an increase in house price, whereas homes near a “Park and Ride” facility experience a decrement in house price.

## 2.8 Summary

This chapter summarizes the study on the use of rail vehicle transport in Kelantan. Three themes will be discussed in this study with their respective sub-themes. The concept of each component theme is also clearly defined to create an understanding of the issues. In addition, the hypothesis statements made in this study have been listed in order to deepen the elaboration of the study of rail transport in the east coast with community views and opinions. Therefore, the framework research method development for the further research process will be discussed in the next chapter.

## **CHAPTER 3: RESEARCH METHODS**

### **3.1 Introduction**

Various methods used in this study's data collection were covered in this chapter. The protocol and procedures followed in the data collection and analysis phases of this report make up the analysis technique. This chapter discusses the study population, sample size, sampling method, research tools, measuring scale, instrument pre-test, data collection and data analysis.

### **3.2 Research Design**

Researchers were seeking for under-researched problems, new ideas and views for the public's views and opinions of the implementation of ECRL project which comparing with three different impacts including economic impact, social impact, and environmental impact. Thus, qualitative method was chosen as the research design.

Gray et al. (2016) claims that it is a system created to address and resolve research challenges. Qualitative approach was used to gather data and analyse it to have a better understanding of the experiences, beliefs and concept in the study. These data were gathered using standardised interview. A significant amount of data for this research topic could be gathered quickly using a qualitative technique.

It entails logically creating a hypothesis or hypotheses based on existing theory and then constructing a research method to test the idea. Descriptive analysis is carried out by utilising information about the variable's characteristics in each scenario. Researchers aim was to recognize and address society's problems. Case study was used to describe the connection between different impacts towards public acceptance on the

implementation on ECRL project. Through case study, researchers can have a detailed study in the topic of implementation of ECRL project. Researchers believe through this method; researchers can gain a holistic understanding of the topic.

Furthermore, the data is presented in words, images or physical objects. We may gain insights into human behaviour, emotion and personality traits from qualitative research studies that quantitative studies cannot. Additionally, it is based on the individual's interpretation of the events, such as when using participant observation, in-depth interviews, and others. For instance, a flexible quantitative study will let us react to user data as it comes up during a session. Qualitative data takes more time to compile, is less generalizable and is more information achieved. This is because only a small sample size and few respondents between 5 and 10 were needed for qualitative data. During the process, behaviours, viewpoints, patterns, requirements, problem areas and other types of information were observed and recorded.

### **3.3 Data Collection Methods**

Data collection refers to the process of gathering relevant information from a variety of sources, testing a hypothesis and evaluating the research findings. Data collection methodologies are classified into two types: primary data collection techniques and secondary data collection methods. This study utilized both primary data and secondary data collection methods.

### **3.3.1 Primary Data Collection Method**

Through the primary data collection method, semi-structured interviews had been conducted by researchers in person by online and face-to-face method. It is the best way to get the useful information that researchers want to know as a couple of key questions were asked to define the related areas that researchers were studying. Gill et al. (2008) explained, given some guidance found useful for interviewee to let them have a better understanding about the questions and information with the specific terms that used throughout the interview. Follow-up questions were asked by researchers to gain a deeper insight from the respondents.

### **3.3.2 Secondary Data Collection Method**

Secondary data had been used to analysis and interpret the data that researchers collected in the primary data. The data were existed from previous journal articles, government publications, news, and websites. It can help researchers to analysis the data when the researchers have a limited time and resources to collect the data from the overall population of the study. Secondary data can generate new knowledge to whom interested to know the original analysis (Hinds et al., 1997).

## **3.4 Study Population**

A population is a collection of creatures from the same species living in the same place. The number of people in a population is referred as population size. The population of this study is located at Kota Bharu, Kelantan. According to Macrotrends (2022), the current estimated population of Kota Bharu in 2022 is approximately 358,000 people.



### 3.5 Sample Size

According to Baker and Edwards (2012), there is no certain number of interviews need to be held, said by the qualitative research experts. Several factors such as epistemological, methodological, and practical issues can be included to determine the sample size. Morse (2000) explained the number of interviews can be measured by the number of useable data obtained. The richer the information given by the participants, the fewer the number of participants is needed.

Vasileiou et al. (2018) stated saturation is the most widely used principle for determining sample size and evaluating its sufficiency. Francis et al. (2010) suggested two principles for the specification of saturation. (i) researchers should specify a purposive diversity sampling such as a minimum of 10 interviews in the first-round of analysis and (ii) a stopping criterion which an amount of interview that needs to be conducted after the first-round analysis with no new themes and presentation of data sequentially. Thus, 10 interviews were conducted in the following study for getting the data that we need through sampling method.

### 3.6 Sampling Techniques

Through the study, the data was analysed using non-probability sampling techniques, where not every person in the population can be included as it based on non-random criteria. This sampling method involved judgement which the sampling individuals were selected based on easy to access but not chosen randomly (Showkat & Parveen, 2017).



Purposive sampling was used to collect the relevant data. Respondents were chosen based on their background, knowledge and understanding of the related topic. According to Bhardwaj (2019), it ensured the quality of the data collected through respondents have different point of views and relevant to the study which was the economic, social, and environmental impacts in implementing ECRL project. As mentioned from Showkat and Parveen, the respondents were chosen because they were expected to have the correct attitude in the case than other group of people.

Maximum variation sampling was used as it can collect different dimension data which has detailed descriptions of the case with uniqueness information (Benoot et al., 2016). Researchers interviewed a total of 10 respondents to obtain information related to the study conducted.

### **3.7 Research Instrument Development**

The data collection method of semi-structured interview and analysis of existing secondary data were used for research instrument in this study. Al-Busaidi (2008) urged qualitative research by semi-structured interview can explore respondents' personal experiences and attitudes. Flexibility is the advantage of this interview method as it brings researchers to enter a new area to study and gained richer data from the respondents. It is a good tool to gain information with different perspectives, understandings and meanings who have different experience and lifestyle. Through the process of reading and re-reading the transcripts, researchers able to discover more about the instrument and concept in the related topic (Sieloff et al., 2018).

### **3.8 Measurement of the Variables**

Reliability and validity were used in the measurement of the variables in qualitative research. Reliability can be referred to a similar interpretation that had been made by several researchers who did similar observations in the topic (Franklin et al., 2010). Two methods were used which provided by York (2020) for increasing the reliability of the variables. (1) Examination of the equivalence of responses to various forms of the same question. It was operated by asking similar question with different words to test the responses from the questions whether has a consistent answer. (2) Establishment of clear procedures for recording field notes which used to manage the recording consistency of observation on the theme.

Validity focuses on the scope to which researchers see what they think they see. It referred to the researchers thinking and opinion while looking on the other people actions. Besides that, Guba (1981) mentioned that credibility is fundamentally same as validity which represents to the truthfulness of the findings. Feedback had been made to understand the acceptance of the relevant people with the findings in the study. Moreover, researchers had search for negative information or data in the study so that it can be ensure that researcher are in a neutral position with rational thinking.

### **3.9 Procedure for Data Analysis**

Data analysis is the act of acquiring and examining pertinent and valuable information or data that may be gathered from the data collection process in order to come to a decision based on personal values. According to Benner (1985), data can be analysed thematically using an open, axial and selective coding scheme. Open coding is a technique

for conceptualising, comparing, and evaluating data. After open coding, data may be categorised by category. An axial code is used to describe this. After the data has been axially coded, it may be categorised into fundamental groups or only partially coded to produce themes that are pertinent to the investigation, leading to the development of themes. After the data was freely coded, axially coded and selectively coded, emerging themes were recognised and ranked in terms of how widespread they were. The process of collecting data from numerous sources and analysing it logically and thoroughly is known as an analytical approach. The locals and residents of Kelantan were interviewed as part of the study's analytical technique. Another strategy is to look for information about ECRL utilising secondary sources such as newspaper articles, books, website searches, and journal articles.

### **3.10 Summary**

As a conclusion, this chapter clearly explained and outlined the methodology that used for the research. This topic discussed study design, data collection methods, study population, sampling techniques, sample size for sampling design, development of study instruments, measurement of variables and procedures for data analysis. Findings will be analysed and discussed in more detail in chapter 4.

## CHAPTER 4: DATA ANALYSIS AND FINDINGS

### 4.1 Introduction

This chapter will discuss about the findings that researchers analysed from the data during interview session. There were 10 interviews conducted to obtain the data. Manual coding was used to answer the research questions.

### 4.2 Findings for economic impact in the implementation of ECRL project in Kota Bharu, Kelantan

This section will evaluate the respondents' level of understanding in the economic impact and their opinion for the relevant impact regarding the implementation of ECRL project in Kota Bharu, Kelantan.

All the respondents trusted that the project costing is still affordable for Malaysia. They believed the fixed and variable cost can be covered by the passenger's average daily volume. Most of them estimated the project will reach the break-even point in the range of 5-10 years. Alan (50 years old, human resource officer) shared his view about the costing of ECRL project, benefit-cost ratio and the break-even point of the project.

“I think the cost is a bit higher but still reasonable compared to the benefits that brought to the country which still affordable for government's budget and traveller's travelling cost. I believe that the construction and maintenance cost can be covered by the passenger's average daily volume and it may take about 5-10 years to turn into a profitable project.”

While Kamariah (54 years old, dentist) felt the project will be profitable after 20 years.

“Looking at the people in Kelantan travelling from the west coast, especially to the capital or Terengganu, the usage of east coast highway is quite high as well as the number of passengers by flight to Kelantan. With the existence of ECRL, it is another alternative to passengers to travel around. So, it is able to cover the maintenance and development cost of ECRL. In the next 20 years, the ECRL project is able to provide profit to the government.”

Lay Ching (48 years old, admin executive) gave her thoughts regarding how ECRL will bring positive economic impact to Kelantan in trade and tourism activities.

“The launch of ECRL will bring more visitors and businesses to Kelantan as the duration of travelling has been shorten thanks to ECRL project. This will positively boost up the tourism and business sectors in Kelantan.”

Other respondents also mentioned that after the launch of ECRL, they believed that the trade and tourism activities will be increased because the duration of travelling to Kelantan has been shorten and it has a better accessibility for going to Kelantan. More tourists will drop by to Kelantan which will help to strengthen the trade and tourism activities.

Fuaad (25 years old, café manager) shared his opinion which ECRL will develop the industry area in Kelantan and provide more job opportunities for the people in Kelantan.

“After the launch of ECRL, I believe that the industry in Kelantan will be more developed. It will bring upon job opportunities and most of the business will run successfully. In a long term, people will have a stable income which will boost up Kelantan’s GDP. It will also help Kelantan’s entrepreneur to sell their products by interstate method.”

Katrina (29 years old, music teacher) explained that the numbers of investment activity will be rising up however it has a bad effect for the locals too.

“I feel that after the implementation of ECRL project, more people will be attracted to make their investment in the nearby area of the ECRL station. But I think that it will also lead to an increasement of land and property value in the specific area which Kelantan locals will face the problem of lacking ability to own a house at the area.”

#### **4.3 Findings for social impact in the implementation of ERCL project in Kota Bharu, Kelantan**

This section will evaluate the respondents’ level of understanding in the social impact and their opinion for the relevant impact regarding the implementation of ECRL project in Kota Bharu, Kelantan.

During the interviews, respondents were asked about the willingness and usage of ECRL to travel once the project launched. All the respondents were happy to use ECRL as their mode of transportation to go for their destination. They answered that they will be using ECRL at least two to three times a year if the price is affordable for them. Fatimah (63 years old, retired teacher) was excited to guarantee that she will be using the rail transport, even will use it every month once the rail transport launched.

“Yes, it is certain that I will use ECRL travel to other destinations especially the capital, Kuala Lumpur. If the price is reasonable and the travelling cost is cheaper than driving a car, I might be going every month until I felt boring of going there.”

Besides that, Alia (24 years old, degree student) feels that ECRL project can help to stimulate urbanisation in the east coast of Peninsular Malaysia.

“In my opinion, it can stimulate urbanisation in the east coast. As we know, east coast of Peninsular Malaysia has a lot of rural area. With the existence of ECRL project, it can develop more industrial areas and boost tourism activities along the route.”

Fuaad (25 years old, café manager) explained the situation that he can imagine after the launch of ECRL. He feels that ECRL can change local’s daily activities for younger generation of Kelantan.

“The person will be happier to have train as they rarely use rail transportation as it is lacking the facilities in Kelantan. When comparing to Kuala Lumpur, rail transportation is a main transport, school students use it for travelling over the school.



When Kelantan students are able to use the rail transportation, they can explore more about the places in Kelantan and other states. As students doesn't have licence, they can't drive, it's a restriction for them to travel around."

Katrina (29 years old, music teacher) mentioned that ECRL provided a safer mode of transportation for Kelantanese.

"Old folks will be beneficial as they will have illness such as vision problems. Even though they have licence, they are not recommended to drive as they can't see properly which will be having problems like accident occurs. With the existence of ECRL, it provides a safer way for old folks to travel for reaching their destination."

Alia (24 years old, degree student) also shared that ECRL project can helps to promote Kelantan's cultural activities.

"I think the ECRL project can helps to promote the cultural activities of Kelantan. When ECRL launched, it's easier for tourist to come over Kelantan. They will be able to experience closely to the cultural activities such as kites, Wayang Kulit, handicrafts and so on."



#### **4.4 Findings for environmental impact in the implementation of ERCL project in Kota Bharu, Kelantan**

This section will evaluate the respondents' level of understanding in the environmental impact and their opinion for the relevant impact regarding the implementation of ECRL project in Kota Bharu, Kelantan.

The first thing that respondents shared about the environmental impact were the pollution issues. They think that the positive environmental impact for the implementation of ECRL project is reducing air pollution as there will be lesser car driving on the road. Aslinda (50 years old, special executive assistant) shared her opinion with a straightforward answer.

“I think the launch of ECRL will reduce the traffic on the road because some of the drivers will use the rail transport to go for their destination. Less amount of car, less air pollution. That’s the simplest thing for me to understand.”

While they have different opinions for noise pollution issues. 7 out of 10 respondents pointed out that noise pollution will be an issue during the construction process and daily operation once ECRL launched. However, 3 out of 7 of the respondents felt that the local community can accept the direct impact. Emelia (26 years old, degree student) expressed her thoughts for the noise that produced by ECRL project.

“Those who live close to the construction site are likely to complain about the noise. Whether we like it or not, we must accept it because it is in our best interest for the development.”

Remaining 4 out of 7 of the respondents felt that the noise will affect the residents of the area. Alia (24 years old, degree student) said her opinion for the noise pollution that came from the ECRL project.

“The presence of noise pollution will slightly affect me if the area where I live is close to the construction area. It will be slightly disturbed.”

While Fuaad (25 years old, café manager) had a different point of view. He mentioned that the deduction of vehicles volume on road will reduce noise pollution that produced by the sound of horn from the car driver or motorcycle rider.

“The sound pollution is often caused by vehicles, when they use the horn while driving on the road, it will become noisy. So, when there is lesser vehicle on the road, it will reduce the sound pollution as well.”

Other than that, 6 out of 10 respondents were worried about the wildlife that may affected due to the construction of ECRL project. While Nazhif (24 years old, degree student) shared his opinion if the ECRL project will affect the wildlife.

“I’m worried that the wildlife will get affected because the ECRL project may build around their habitat. Although I’m an animal lover, but things use to be done for the better future of our state. I hope all the animals found their new homes.”

Furthermore, respondents were asked for their opinion for the rise of construction cost of ECRL project to reduce the environmental impact such as reduction of forest land

usage and conserve the wildlife. All of the 10 respondents agreed if the rise of construction cost can reduce the environmental impact. Fuaad (25 years old, café manager) shared his opinion if the ECRL project will affect the wildlife.

“I agree, as a Malaysian, I think it is a necessity for Kelantan to carry on this project as Kelantan need to chase up to the new era. Malaysia has plentiful of wildlife which we can see many preserves action were done from the states like Pahang, Sabah and Sarawak. It is a need to increase the budget so that we could protect the wildlife that will be unable to return back to us if we destroyed it.”

#### 4.5 Summary

In conclusion, this chapter was written with the findings that analysed from the data in the 10 interviews that have conducted. Discussion and conclusion will be mentioned in chapter 5.

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## **CHAPTER 5: DISCUSSION AND CONCLUSION**

### **5.1 Introduction**

This chapter goes over the findings from the previous chapter in detail. Following that, all findings will be presented, and the accomplishment of research objectives will be determined. As a result, the study's outcomes are discussed in terms of intention, research objectives and questions, research findings, and recommendations for future research.

The research implemented an exploratory, descriptive, and contextual qualitative approach. Exploratory, fully accessible, qualitative interviews were carried out with 10 Kelantan locals who were deliberately chosen to be participants in this study. The interview was conducted in English and Malay, while the interview sessions has been recorded, after which data was coded and studied. In general, the primary goals of this study ought to analyse the economic, social and environmental impacts in the implementation of ECRL project in Kota Bharu, Kelantan.

### **5.2 Key Findings**

The research objectives in the study are to evaluate the economic impact, social impact and environmental impact in the implementation of East Coast Rail Link (ERCL) project in Kota Bharu, Kelantan.

The following interview question will help to achieve the research objective which is to evaluate the economic impact in the implementation of East Coast Rail Link (ERCL) project in Kota Bharu, Kelantan.

“Can you share about your thoughts for the economic impact that can be occurred in this project?”

Respondents shared a few economic impacts that they feel it will be happened after the implementation of ECRL project.

1. The cost to implement ECRL project is affordable for Malaysia.
2. The fixed and variable cost can be covered by the passenger's average daily volume.
3. The project will boost up trade and tourism activities after the launch of ECRL which will bring more visitors and businesses to Kelantan.
4. The industrial area will be developed and provide more job opportunities after the launch of ECRL project.
5. Investment activities, price of land and property will be increased in the nearby area of ECRL station but on the same time it might be lacking ability for Kelantan locals to buy their property in the area.

The following interview question will help to achieve the research objective which is to evaluate the social impact in the implementation of East Coast Rail Link (ECRL) project in Kota Bharu, Kelantan.

“Is there any social impact that you can find out in this project?”

Respondents gave some views about the social impacts that they feel it will be happened due to the implementation of ECRL project.

1. ECRL project helps to stimulate urbanisation in the east coast of Peninsular Malaysia to let more people able to come across Kelantan with public transport.
2. ECRL project can change local's young generation daily activities once it launched by providing them chance to explore around.
3. ECRL project provides a safer way to travel especially for old folks that have illness.
4. ECRL project helps to promote Kelantan's cultural activities by letting people to have a close experience in the traditional activities of Kelantan.

The following interview question will help to achieve the research objective which is to evaluate the environmental impact in the implementation of East Coast Rail Link (ERCL) project in Kota Bharu, Kelantan.

“Do you think this project will bring up any environmental impact?”

There were some different views and opinions from the respondents regarding the environmental impacts that they feel will happen in the implementation of ECRL project.

1. ECRL project can reduce air pollution by changing the mode of transportation from own vehicles to the public transport which will reduce the vehicles driving on the road and at the same time reduce carbon dioxide emission.
2. Noise pollution occurred during the construction and daily operation of ECRL project.
3. Noise pollution from the horn of vehicles can be reduced as some of the travellers will use ECRL to travel around which will reduce the vehicles on the road.

4. Wildlife will get affected as ECRL rail line may build around animals' habitat.
5. Malaysia government will be spending additional cost by realignment, tunnelling and mitigation methods for wildlife crossing to minimize the environmental impact such as preserving wildlife habitats and safety of wild animals.

### **5.3 Implications of the Study**

The study's findings clearly demonstrated that the majority of Kelantanese have accepted the pollution caused by the construction of the East Coast Railway Line (ECRL) and are looking anticipating its service. Although this might lead to some negative impacts, especially pollution, they are willing to accept a new transportation.

### **5.4 Limitations of the Study**

According to Price and Murnan (2004), research limitations are the characteristics inherent in the research methodology or design that changes the meaning and interpretation of the research results. Limitations are not necessarily issues that reduce the usefulness and validity of the research. Limitations of the study are issues and challenges that researchers face during the study that may influence or impact the results and interpretations of those results.

Limitations, due to the flood situation in Kelantan, it is not possible to go to the school library and get references when writing research proposals. However, in order to deal with this issue, researchers accessed topics and paper writing websites instead of going to the library.



Aside from that, one of the limitations to finishing this paper is the time constraints of the paper submission. This paper used a qualitative method to collect data from participants, which took more time to organize and implementation.

### **5.5 Recommendations for Future Research**

This study aims to focus the public acceptance according economic, social, environmental aspects towards implementation of ECRL project in Kelantan. The results of this study might be differed from other similar research as the ECRL project is not limited to Kelantan. As a result, it is worthwhile to expand the research from Kelantan to Peninsular Malaysia in order to improve the accuracy and reliability of the study results.

### **5.6 Overall Conclusion of the Study**

In a nutshell, this study offers a glimpse into the perspectives of Kelantan natives on issues related to the economy, society, and environment. The study's findings clearly demonstrated that the ECRL development project received good response from users and also the locals on the impact to economic and environment. Meanwhile, inhabitants in the area expect the ECRL to be highly assessable, time-saving, and comfy. Positive impacts were found with plenty of negative impacts in three aspects which were economic, social and environmental. It proves the effort of Malaysia government in trying their best to maximize the positive impact and minimize the negative impact that come across this project



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## APPENDIX A - Draft of Interview Questions

1. First of all, can I know more about you with your name, age, occupation, income range, education level, family size and frequency of travelling a year?
2. Do you know about East Coast Rail Link (ECRL) project and how did you know about it?
3. Do you think Malaysia need this project now?
4. What is your opinion about the cost of the project, and do you think it is affordable for Malaysia?
5. Will you use ECRL travel to the other destination once the rail transport launched and how frequent will you expected to use it a year?
6. Can you share about your thoughts for the economic impact that can be occurred in this project?
7. What do you think the implementation of ECRL project will lead Kelantan's economy in a long-term effect?
8. Is there any social impact that you can find out in this project?
9. Do you think this project will bring up any environmental impact?
10. Do you agree for the rise of construction cost of ECRL project to reduce the environmental impact such as reduction of forest land usage and conserve the wildlife?

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