

## RESEARCH SUMMARY

# THE ROLE OF ECONOMIC INFRASTRUCTURE IN REGIONAL DEVELOPMENT:

## *Strategy to strengthen tourism economic zones' supporting system*

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### Abstract

Regional based development is an important issue to Indonesia as an archipelago country. One of the alternatives to this issue is tourism development, theoretically tourism-dependent economy expectedly has positive impact to the economy. Regional development based on tourism expectedly can be more progressive were it supported by tourism special economic zones. Therefore, the availability and appropriateness of the infrastructure must be examined. The aim of this research is to map tourism infrastructure condition in Indonesia, identify the obstacles of tourism infrastructure development, and analyze supporting infrastructure for inclusive and competitive tourism economic zones. The results show that there are still different definitions for tourism that affects the policy implementation. Moreover, there is still gap between infrastructure availability and needs in the tourism development, especially in tourism economic zones. Otherwise, community in the tourism economic zones surrounding areas has relatively strong social capital to support tourism. This condition should be the other supporting factors besides proper infrastructure and governance.

**Keywords:** regional based development, tourism development, tourism infrastructure, policy implementation

### INTRODUCTION

This research is important to be conducted due to some factors. Regional based development is an important issue in Indonesia as an archipelago country where the development of strategic economic zones will be the key factor. As the natural and cultural resources spread throughout Indonesia, the development target should be directed to the sector, which can produce high value added and relatively

fast return like tourism-dependent economy. This target is not only important to increase economic competitiveness, but also to absorb people participation intensively or having inclusivity. In other words, labor absorption, investment realization, foreign exchange creation, national income growth, also inter regional income redistribution can occur from supporting tourism sector.

Currently, tourism contribution towards national gross domestic product (GDP) annual average was 4.5 percent. The government effort to reach targeted 8 percent contribution needs harder attempt. One of the government's endeavor to boost tourism sector is developing tourism economic zones with some regulations. However, those efforts will need support from infrastructure development. The availability and effectiveness of infrastructure actually is directed to create and encourage visitation, to extend and increase the number of tourists' expenditure, also to ease the tourists' accessibility to visit any other regions. The infrastructure development is not only important for the tourists, but also for local communities. Hopefully, this ideal condition can simultaneously increase competitive and inclusivity.

Based on the background, this research will try to assess the role of tourism economic infrastructure in Indonesia to support com-

petitiveness and inclusivity potency of tourism economic zones. The aim of this research is to describe Indonesian tourism infrastructure current condition, to identify some obstacles of tourism infrastructure development also to analyze inclusive and competitive aspects of tourism economic zones' supporting infrastructure. In order to answer the research questions, this research is a grounded research with using correlational inductive approach. The approach is used to get general conclusion from field observation result by analyzing relationships between observed variables.

**Table 1.** Role of Economic Infrastructure in Regional Development

Infrastructure can create production efficiency, distribution efficiency, and demand for tourism service. The achieved efficiency can encourage economic agglomeration, which cover push and attraction to the other regions.

Pembangunan Wilayah	Konsep Ruang → Ekonomi Regional		Dubey (1964), Perloff dkk (1964) dan Isard (1975)	
	Ekonomi Regional → Transformasi Konseptual	peran dari pengambil kebijakan (Pusat dan Daerah), pelaku usaha, komunitas, akademisi + media	Ascani dkk (2012), Moreira (2016) dan Storper (1995 dan 2005)	
	Aglomerasi Ekonomi	teori lokasi dan economic geography	Konsentrasi spasial (Gaya Sentrifugal dan Sentripetal)	Waldfogel (2010), Krugman dan Fujita (2004)
	Pariwisata			Balaguer dan Pernias (2013)
	Infrastruktur Pariwisata (Turistik dan Para Turistik)	efisiensi produksi, distribusi jasa pariwisata, serta <i>supply</i> jasa pariwisata		Biehl (1991), Mohamed dan Omar (2005), Panasiuk (2007) & Jovanovic (2016)
	4 Pilar Pendorong Pariwisata Berdaya saing dan inklusif (Infrastruktur Fisik, Sumberdaya Manusia, Pembiayaan dan <i>proper governance</i> )			Adam-P2E LIPI (2016) & Firdausy dkk P2E LIPI (2016)

Additionally, tourism supporting infrastructure can stir inclusive and competitive regional economic, with condition of policy maker (central and regional), businessmen, community, academician, and media incentive role. Eventually, the success of regional economic development will be determined by how far the infrastructure (in this context, tourism supporting infrastructure) can be an incentive

to increase productivity, creation of new growth center, and accessibility expansion.

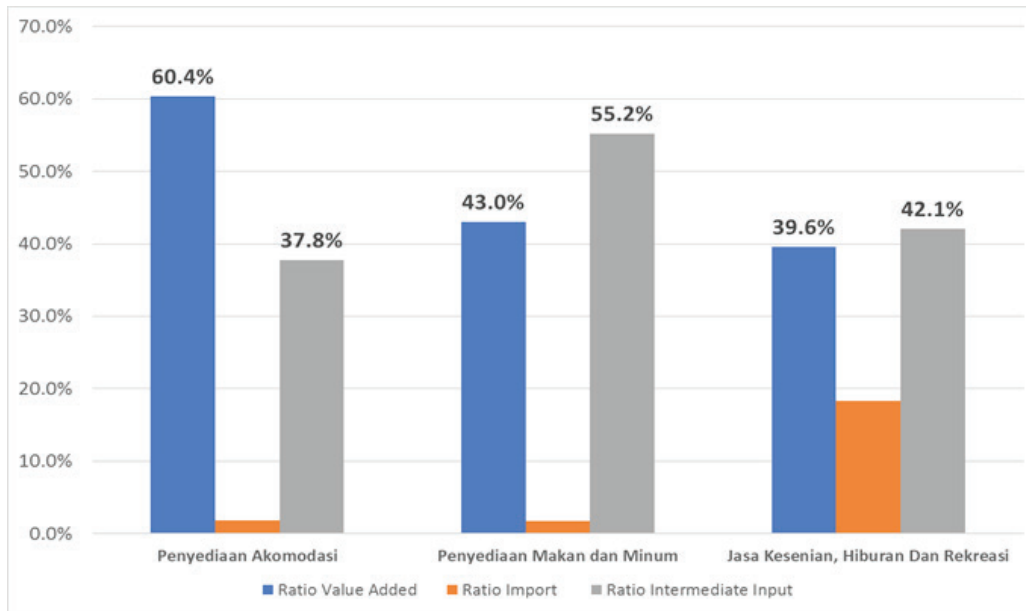
## ANALYSIS

Judging from the structure of the use of inputs, the tourism sector is a service sector that uses a lot of primary inputs (value added) rather than intermediate inputs. For the accommodation sector, 60% of the inputs used are primary

inputs and 37% are intermediate inputs. While for the food and beverage supply sector, 55.2% of the input used came from intermediate inputs. The arts, entertainment and recreation services sector actually has the highest production input from abroad (import) compared to other sectors.

**Figure 1.** The Structure of Tourism Service Sectors' Use of Inputs

With the injection of Rp. 4,000 Trillion in the infrastructure sector, it will generate an increase in the number of outputs for the 3 tourism sectors of Rp. 55.8 trillion or equal



to 0.014 times the original condition, while for the 10 sectors, Rp. 96.3 trillion or equal to 0.024 times. In terms of labor compensation, there is an additional wage of Rp. 8.8 billion for 3 tourism sectors and Rp. 16 billion for 10 tourism sectors.

**Table 2.** Outputs of Three Tourism Sectors

Location Quotient represents whether an economic sector is the basis of an area or not. In the Province of Bangka Belitung, the accommodation and food and beverage sectors are the basis for Kab. Central Bangka, Belitung,

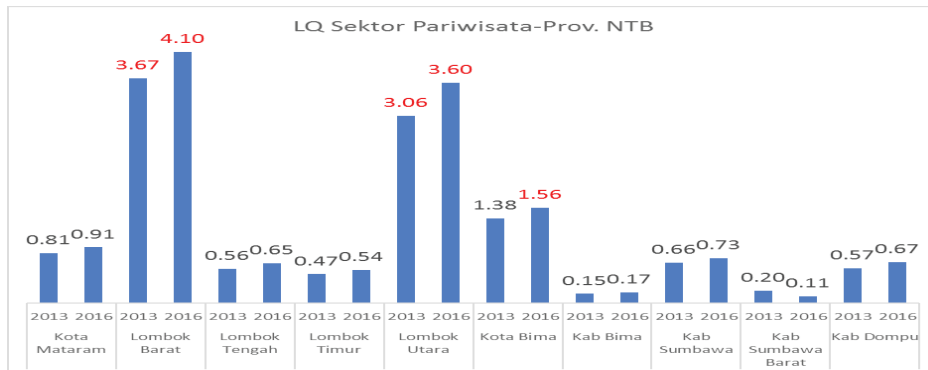
Sektor	Dampak (Rp. Juta)	Benefit Pembangunan Infrastruktur Terhadap Sektor (Kali)
<b>Output</b>		
Pariwisata 3	55,893,569	0.014
Pariwisata 10	96,321,287	0.024
Seluruh Sektor	7,718,953,449	1.930
<b>Kompensasi Tenaga Kerja</b>		
Pariwisata 3	8,876,874.38	0.002
Pariwisata 10	16,086,021.97	0.004
Seluruh Sektor	1,097,398,215.96	0.274

East Belitung, and Pangkal Pinang City. Whereas for West Nusa Tenggara, the accommodation and food and beverage sectors are the basis for West Lombok, East Lombok and Bima Cities.

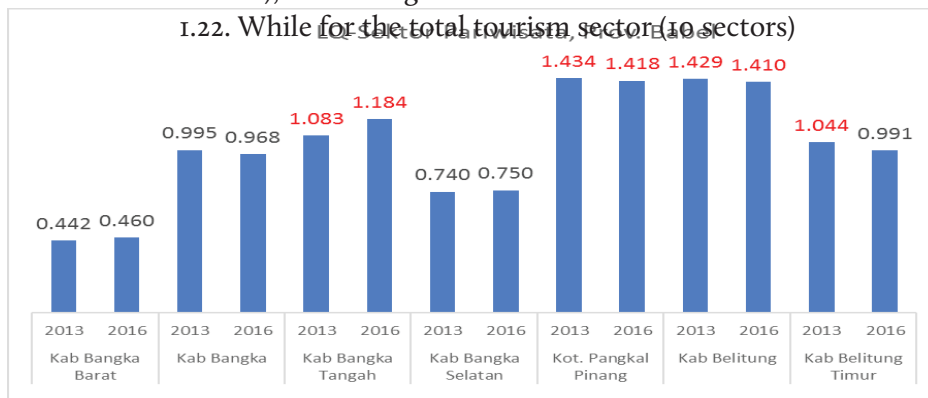
Figure 2. Location Quotient of West Nusa Tenggara

Figure 3. Location Quotient of Bangka Belitung

The tourism sector has accelerated growth faster

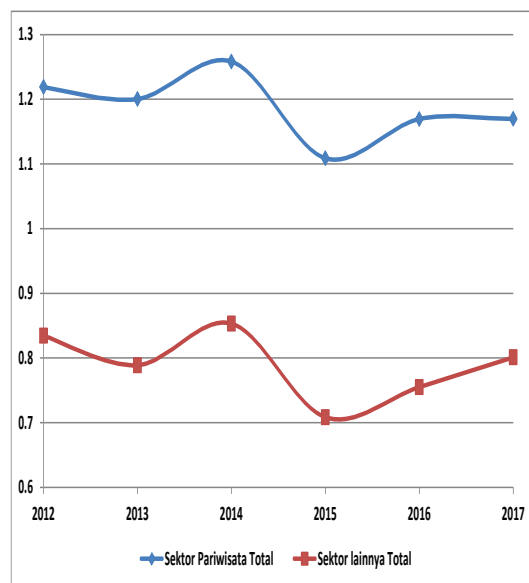


than other sectors. For the core tourism sector (3 sectors), the average has an acceleration index of 1.22. While for the total tourism sector (10 sectors)

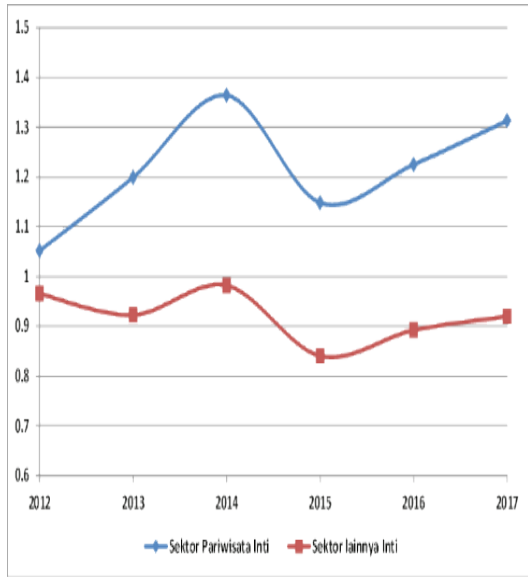


it has an acceleration index of 1.19. Thus the two types of tourism sector have accelerated growth faster than national economic growth (index value > 1)

Figure 4. Accelerated Growth of Total Tourism Sector

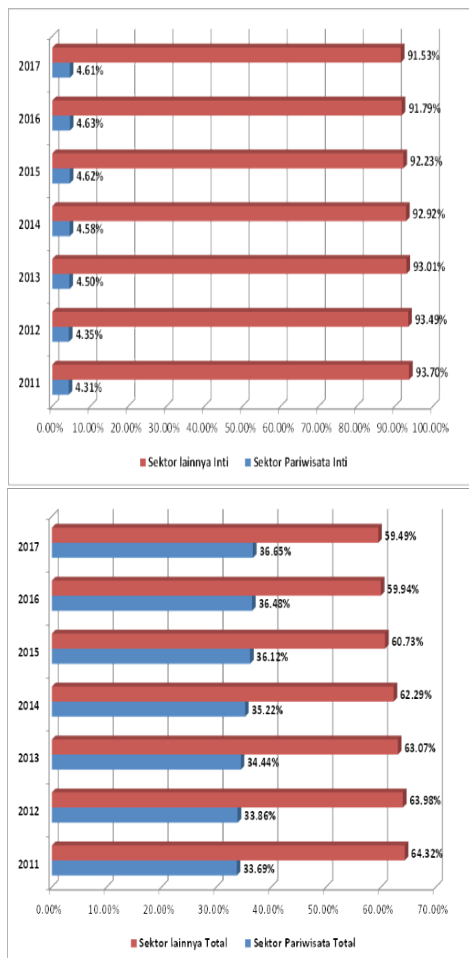


**Figure 5.** Accelerated Growth of Core Tourism Sector



In terms of contribution, the core tourism sector on average only contributed 4.5%. Whereas if you use the total tourism sector, then the contribution of the sector average increases by 36.12%.

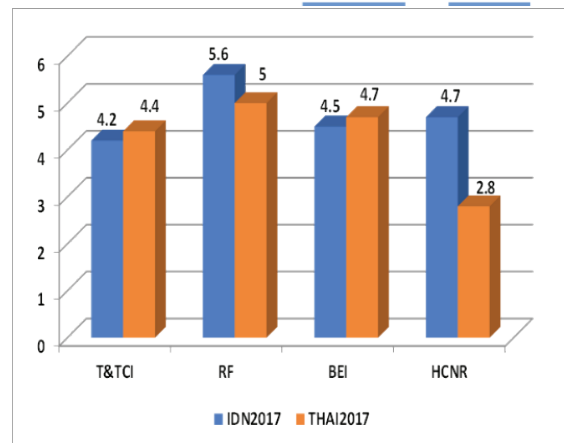
**Figure 6.** Tourism Contribution



The attractiveness of Indonesian tourism in the eyes of the world can be reflected in how long and how much money is spent while in Indonesia. Interesting, apart from Hong Kong, Saudi Arabia and South Korea due to inbound tourism bias. Data shows that length of stay is not always a guarantee that tourists will spend more money. For example, tourists from Europe, have a longer stay, but their expenses are relatively less than other American and Asian tourists.

In terms of travel and tourism competitiveness index in 2015 to 2017, there are several sectors that have increased, but not many have decreased. For example, for the infrastructure sector, starting from airports, ports, to supporting infrastructure tourism services have decreased, although not too drastically.

**Figure 8.** Travel and Tourism Competitiveness Index in 2015 to 2017

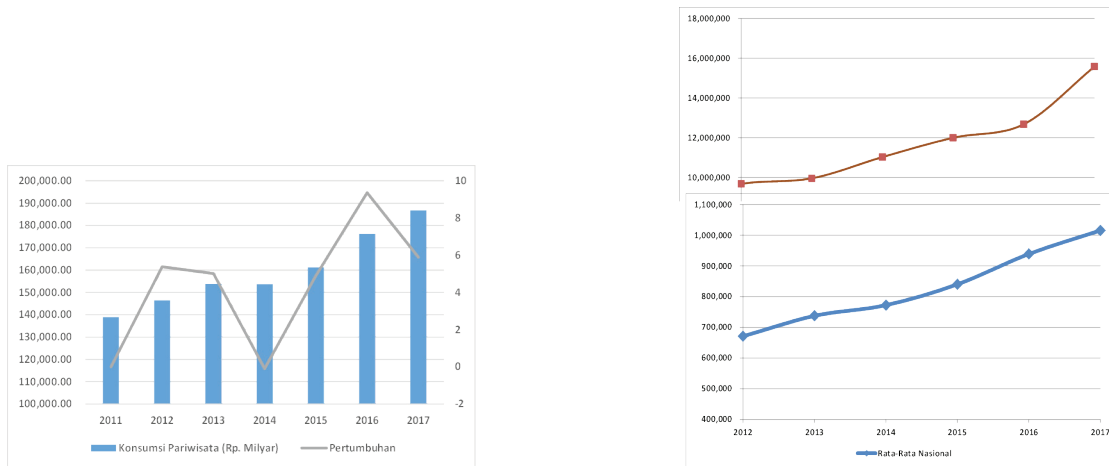


Tourism activities are indeed not the main consumption for all segments of society. However, using Susenas data and several

macroeconomic data, how much money is spent on tourism activities among the community can be measured. Macroeconomically, consumption for tourism in 2017 reaches Rp 190 trillion. On

the other hand, household data shows that nationally the expenditure for traveling in 2017 is IDR 1,000,000 and for the upper class households it reaches above IDR 10 million.

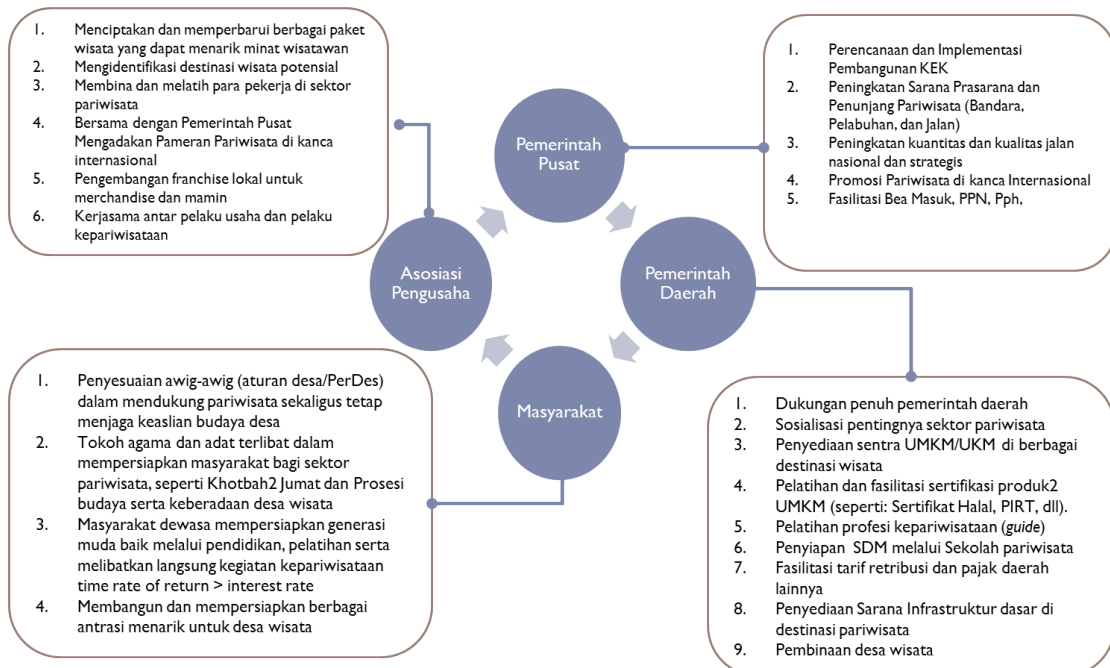
Figure 9. Susenas data



Development in tourism is a multidimensional development and involves many actors.

Each of these actors in fact has duties and authorities that are synergized with each other.

Figure 10. Actors in Tourism Development



The government has been trying to build tourism in Indonesia, in a number of regions, one of which is building Tourism Special Economic Zones (KEK), namely Central Lombok District Mandalika, West Nusatenggara, and Tanjung Kelayang Tourism Special Economic Zone (KEK) Belitung Regency, Bagka Islands Belitung. With the enactment of these two

Regions to become Special Tourism Economic Zones (KEP), it is expected that infrastructure development in the region or in the regions (provincial level) can run faster and have higher accreditation in supporting regional and national tourism.

**Table 3.** Details of Tourism Special Economic Zones

	Mandalika	Tanjung Kelayang
<b>Akomodasi/Hospitality</b>		
<b>Umum</b>	Hotel, restoran, resort, cafe	Hotel, restoran, resort, cafe
<b>Khusus/Unik</b>	Rumah pohon	Kampung wisata
<b>Retail</b>	Shopping center, handicraft outlet, 24H store	handicraft outlet
<b>Transportasi</b>		
<b>Darat</b>	Taxi, angkutan umum, online car/bikes	Mobil (sewa) dan online car/bikes
<b>Pelayaran/Penyeberangan</b>	Ferry (Bali - Lombok)	Ferry (Bangka – Belitung)
<b>Penerbangan</b>	Penerbangan Nasional dan Internasional (Bandara Internasional Zainuddin Abdul Madjid (ZAMIA)	Nasional (indirect) dari Jakarta, local (Pangkal Pinang – Belitung), bandara H.A.S Hanandjoeddin Airport. Charter flight (Singapura, Malaysia dan China). Ditetapkan sebagai bandara internasional 2016 lalu (belum berjalan)
<b>Atraksi Wisata</b>	Exhibition & Convention, international circuit, Bau Nyale	Bukit Pramoon, event Tanjung Kelayang
<b>Paket Wisata (Tour &amp; Travel)</b>	Travel agent	Travel agent
<b>IT Telekomunikasi</b>		
<b>Jaringan Energy</b>	Listrik, gas	Listrik
<b>Pendidikan dan pelatihan</b>	SMK Pariwisata; profesi pemandu wisata	SMK Pariwisata, BLK Pariwisata (2019 beroperasi); profesi pemandu wisata

Comparison of comparison and availability of tourism infrastructure in the Mandalika Tourism Economic Zone (KEP) (West Nusa Tenggara) and Tanjung Kelayang (Bangka Belitung Islands) show a relatively similar pattern. By looking at the availability of existing tourism infrastructure, further infrastructure development (such as routes and flight frequencies, price certainty, new attractions, renewal of destinations, local shelters, variations in tour packages, etc.) can be done to further enhance tourist attraction, increase competitiveness tourism, the number of tourist visits and especially the local and national economy.

Development of tourism is no longer only understood as limited to economic growth, but furthermore the formation of a harmonization of socio-cultural life with the environment. Socio-cultural analysis shows that communities in Lombok and Belitung have the capital

to adapt as National Tourism Destinations. Nevertheless, people in both regions still need an effort to be able to adopt a number of new values that are able to become the foundation of local tourism development. The patterns of socio-cultural wisdom that have developed in Lombok and Belitung up to now are one indicator as the carrying capacity of tourism destinations.

Physically, Lombok and Belitung are blessed with natural beauty that supports tourism development. Besides its beautiful nature, there has been formed a strong social harmony among its pluralistic community. Even cultural pluralism has made the region increasingly rich in diversity. However, the people of Lombok and Belitung still need to be able to adopt a number of new values. This needs to be the foundation of the community in developing local tourism better. New values that need to be adopted in

the culture of the local community, among others, foster an entrepreneurial spirit, work ethic is high, thrifty and away from consumptive behavior.

Condition of human resources in Kep. Bangka Belitung and NTB still need a relatively significant increase. In quantity, the number of workers in tourism still cannot meet the supply of labor. Most of the population in both regions work as farmers and fishermen, which represent the economic structure dominated by the primary sector. However, as long as tourism is still being developed, the need for labor will continue to increase. Moreover, expectations for wages in tourism are better than the primary sector, reflected through input-output analysis. This condition can be a driving factor for the movement of workers from the primary sector to tourism.

Furthermore, the most important thing to do in order to create competitive human resources is through tourism conscious education. Once the community is exposed to the awareness of the importance of the tourism industry, the sense of ownership and participation will gradually increase. Government support for the existence of formal and informal education related to tourism should be carried out not only tourism workers but also the community in general. However, these efforts may not show results in the short term because the current generation still works in the primary sector and does not yet have a full awareness of tourism. Preparations for competing and quality future generations will be the best strategy to fill the demand for tourism in the future

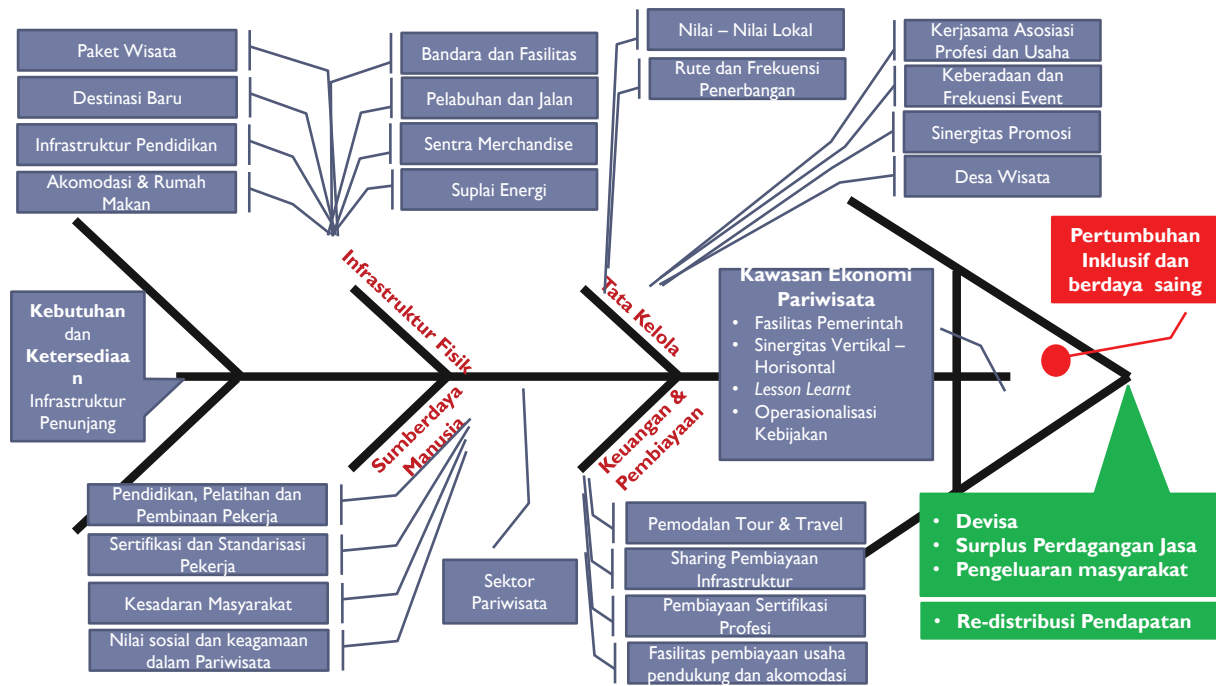
Financing for infrastructure development costs a lot. The total funding requirements for infrastructure financing for 2015-2019 reached Rp 4,796.2 trillion, of which only 41.3 percent of the total needs could be financed by the government (central and regional). Thus, there is a substantial financial gap in infrastructure financing so that it needs to involve all stakeholders. Therefore, alternative financing for infrastructure development through Public Private Partnership (PPP), Government and Business Entity Cooperation (PPP), and other financing alternatives can be a

solution, especially infrastructure development in the tourism sector.

Mandalika was designated as the Tourism SEZ in 2014, while Tanjung Kelayang in 2016. After the determination process, the two KEK Management Bodies of the tour could not immediately build the area due to land ownership conflicts with local residents and entrepreneurs who owned land around the area. At present, although the intensity is much reduced, at some point in the area there are still people and local entrepreneurs who have SHM-certified land. The case of land ownership in the area has made the Management Agency unable to adequately build infrastructure according to the master plan. The unavailability of adequate infrastructure is likely to be one factor why not many investors are interested in investing in the region.

The construction of infrastructure in Mandalika is relatively better than in Tanjung Kelayang. However, the availability and quality are still not fully able to meet the expectations of the business world. Within the region, several business actors complained about the inadequate width of the road and the availability of electricity and clean water. Outside the region, they are dissatisfied with the systems and transportation networks both land and sea, especially those that are the link between tourist objects, such as the road that connects Kuta Beach and Senggigi Beach.





**REFERENCES**

Biehl D 1991, "The Role of Infrastructure in Regional Development" dalam Vickerman, R.W., Eds., *Infrastructure and Regional Development*, Pion, London

Dubey V 1964, "The Definition Of Regional Economics", *Journal of Regional Science*, Vol. 5, hal.25-29

Fujita M & Krugman P 2004, "The New Economic Geography: Past, Present and The Future". *Regional Science*, Vol. 83

Isard W 1975, "Introduction to Regional Science", Englewood Cliffs, N.J: Prentice-Hall.

Moreira A 2016, "Entrepreneurial Tourism: The Creation of Business Opportunities in the ADRIMAG Region, Portugal", in Handbook of Research on Entrepreneurial Success and its Impact on Regional Development, IGI Institute

Perloff HS 1960, "Regions, Resources, and Economic Growth", the Johns Hopkins Press

Storper M 1995, "The resurgence of regional economies, ten years later: The region as a nexus of untraded interdependencies", *European Urban and Regional Studies* No.2, hal.191-221.

Storper M 2005, "Society, community and economic development", *Studies in Comparative International Development*, No.39, hal.30-57.

Waldfoegel, Joel. (2010). "Who Benefits Whom in the Neighborhood? Demographics and Retail Product Geography". Dalam Glaeser, Edward L (Editor). *Agglomeration Economics* (hal. 181 - 209). USA: The University of Chicago Press.

