

## THE INFLUENCE DISPLACEMENT OF AN URBAN AIRPORT HAS ON AIRPORT CHOICE AND MODE CHOICE

Existence of Airport is getting more important day by day, because of that understanding about airport related issues are becoming important also. One of the important thing is issue about displacement of airport.

The aim of the research is to reveal the influence of airport displacement in multi-airport region on airport choice and mode choice. The research was conducted using Multinomial logit regression done by SPSS and Simulation using PTV Visum. The variables considered as influence factors are airfare, frequency, distance for airport choice, as well as access cost and access time for mode choice.

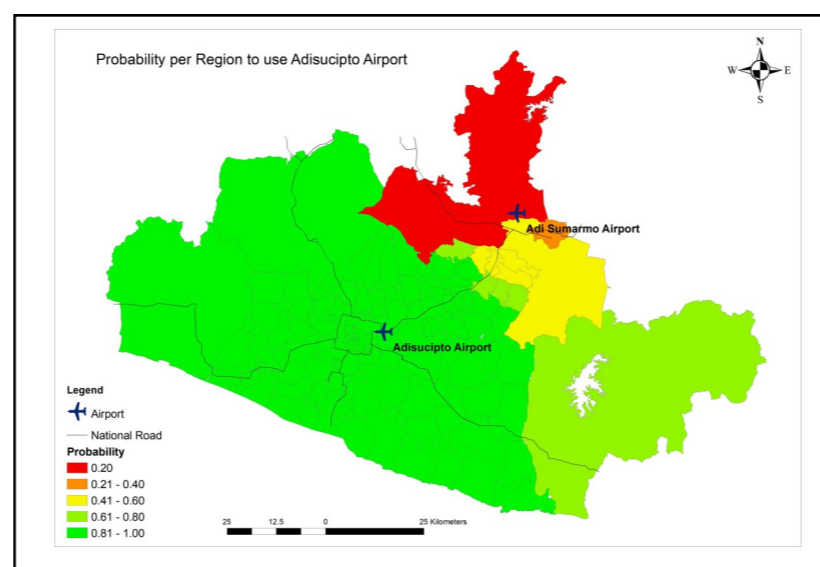


Figure 1: Existing probability to use Adisucipto Airport

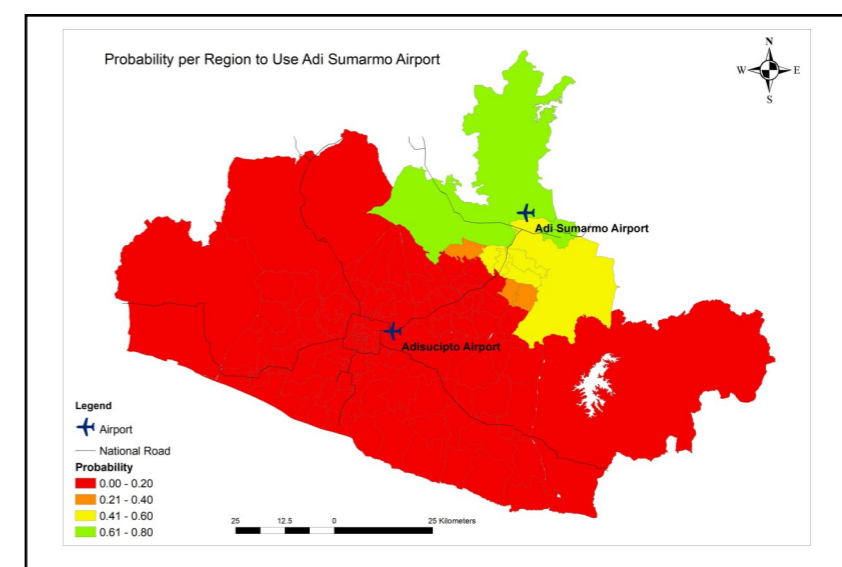


Figure 2: Existing probability to use Adi Sumarmo Airport

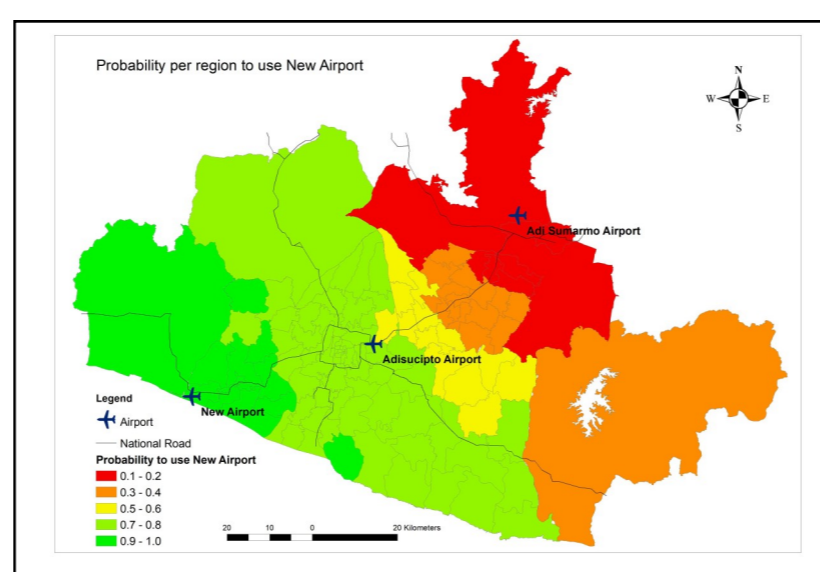


Figure 3: Probability to use Adisucipto Airport in future

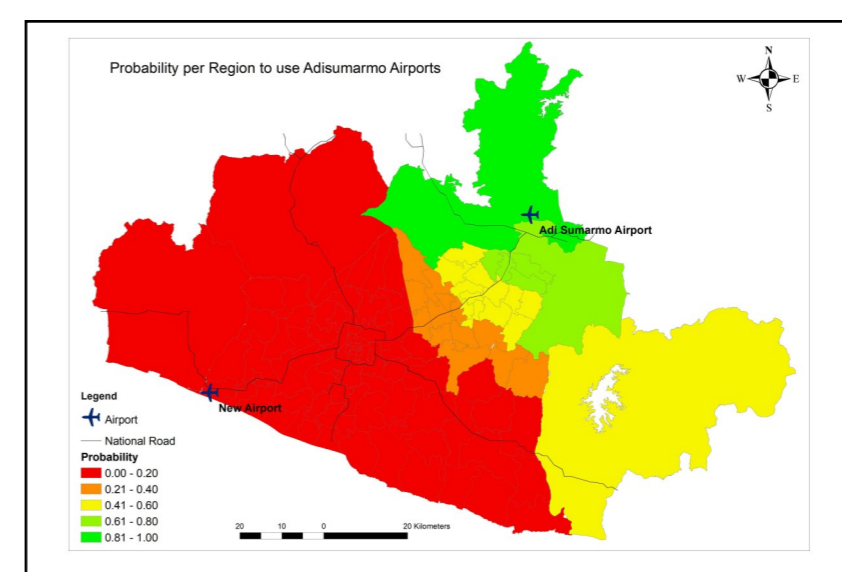


Figure 4: Existing probability to use Adi Sumarmo Airport in future

The research revealed several informations which also can achieve the aim. The results are as follow:

- 1) The considered variables was proved significant to influence airport choice and mode choice.
- 2) The displacement of airport will change the market share and the probability to use certain airport as shown on figure 1-5. The market share of alternative airport (Adi Sumarmo Airport) becomes larger and there are wide area that have probability to use both airport in future.
- 3) There are changes in number and share of transport demand to access the airport. The changes depend on flight frequency offered, distance between passenger location and condition of area close to airport.
- 4) Under current situation, resident prefer to use car, while student and tourist/visitor prefer to use car as well as taxi.
- 5) There are distance limits to use transport to access airport. The limits are different depending on the type of passenger status (resident, student, visitor), their access to private vehicle, and their willingness to pay.
- 6) In general, the demand of train usage is increase but in the simulation that potential couldn't be optimized due to the train service is not attractive compared to other transport mode.

Mode	Origin demand	Destination demand
Car	249.014	220.248
Motorcycle	143.068	139.177
Taxibike	8.640	4.317
Taxi	44.290	26.541
PuT	139.151	83.886

Table 1: Existing OD demand/hour at Adisucipto Airport

Mode	Origin demand	Destination demand
Car	205.416	181.887
Motorcycle	68.383	62.256
Taxibike	0.233	0.089
Taxi	22.946	14.443
PuT	203.374	140.502

Table 2: OD demand/hour in future at New Airport

Thesis of cand. Aditya Pradana Ganda Saputra, M.Sc.

Examiner: Prof. Dr.-Ing Ullrich Martin

Advisor: Maureen Bridget Kösters M.Sc.

Viktor Bartels M.Sc.

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