

# THE EFFECT OF BAD NEIGHBORHOOD TO THE SHOPS IN MALL

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## SUMMARY

Being founded at 1988, Selcuklu district is the biggest central district and consists of 72 streets. It has more population than 51 province of Turkey and it has 1863 km<sup>2</sup> land in total. There is a university where 85000 students are lectured, almost 200 primary and high schools, 3 organized industrial zone, so many small and medium industrial sites and 77500 ha cultivable agricultural land in Selcuklu. Transportation is mainly based on single lined tramway and 26 lined minibuses (530 unit). Selcuklu produces the 25% of the gross national product of Konya. The four malls of Konya are all located in Selcuklu. Besides there are 19 supermarkets in the district. There are 11 hospitals with more than 4000 beds capacity and 23 private polyclinics in the district.

Since there are so many attraction location occurred because of these features, Selcuklu has significant potential in education, production and healthcare. Urbanization rate is 89% and each year around 35000 new housing are built. Municipality management provides new forestation areas, picnic areas and environmental facility areas to satisfy the needs of habitants. However, since there are so many industrial facilities, they may cause fetid odor, visual pollution and air pollution for their neighborhood.

The negative influence of bad neighborhood (fetid odor, noise, environmental pollution, visual pollution, ...) to value of houses in nearby residential area is a known scientific fact. In this study the effect of bad neighborhood to real estate value is going to be researched by picking some shops in similar line of business inside of two malls which are very close to each other and have almost the same properties (one of them is in visual and air pollution zone and the other is in pollution-free zone).

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## 1. INTRODUCTION

Konya's known history dates back to 10<sup>th</sup> century B.C. Çatalhöyük, which is one of the first known settlement of Neolithic era in the world (recorded in UNESCO world heritage), is located 50km southeast of Konya. Konya then was one of the important settlement of Hittites, Lydians and Romans. It became the capital of Anatolian Seljuk Sultanate, the first Turkish state founded in 1074 in Anatolia, and then became the capital of Karamanoğulları seignury. Briefly stated, Konya is a historical city hosting variety of civilizations approximately for 10000 years [1].

In today's Turkey, Konya is an important city located in the center of Anatolia with its history, agricultural lands (1.), industrial facilities (7.), educational institutions (4.) and population (7.). Being located in middle Anatolia region, because of educational institutes' features and amplexness of industrial facilities, it got significant number of immigrants from surrounding cities and eastern cities of Turkey. While its population in 1980 is 1 250 000 (46% of it is urbanite population), today its population is 2 230 000 (83% of it is urbanite population).

Annual 5% of population raise and migration forced municipalities for new organizations, to open new settlement areas and parallel to this, forced them to improve city development plans. The city center which fitted in an area having approximately 3km radius in 1980 (KAKS: 0,30), can't fit in an area having 20km radius today (KAKS: 1,00). To make people "urbanite" living in density in the city center, in city development plans there are larger industrial zones, educational areas, environmental facility areas and shopping malls which satisfies the most of the needs of locals.

## 2. SHOPPING MALLS IN KONYA

In recent years shopping culture has evolved from street shops into shopping malls. Since shopping malls provide variety of opportunities such as entertainments, cinema, kids' playground and activities, they became point of interest. And new shopping malls are being opened all over the world rapidly.

The interest towards to shopping malls are ever increasing since shopping malls in Konya satisfies the needs of;

- a) Entertainment,
- b) Culture,
- c) Shopping,

by respecting consumer rights. In Konya city center there are 5 shopping malls apart from hypermarkets (more than 30).

In shopping malls there are free features such as;

- a) Car park,
- b) Wheelchair,
- c) Baby diaper changing room,
- d) Medical room,
- e) Masjid,
- f) Transportation vehicles for customers,
- g) Restrooms,
- h) ATMs,
- i) Exhibition services for social responsibilities

and there some features for a fee such as;

- a) Amusement park,
- b) Cinema saloons,
- c) Kids' playground,
- d) Hypermarket,
- e) Pay phone,
- f) Variety of shops for different needs.

All of the features above are provided under circumstances of ideal warmth, bright lights, soft music, limited area, campaigns and raffles by professional salespeople to the customers. To provide these services shopping malls employ:

- a) Mall manager,
- b) Management staff,
- c) Technical staff,
- d) Janitors,
- e) Security officers,
- f) Gardeners

Besides it provides electricity, water, sewer, cleaning, air conditioning and stuff and tool expenditure for entire mall. Shopping mall management gets either %20 - %25 of the gain from shop owners or %20 of the rent value of the shop for these expenditures and services provided [2].

Shops in malls are in variety of business lines. In this study only the data, which is presented by owners of clothes shop of national and international brands from both shopping malls, is used to have reliable results.

## 2.1 M1RL shopping mall

It is opened in February 2003. It consists of prefabricated columns and beams and has old architecture for today. Located 12km north of Konya city center, it has 58 500 m<sup>2</sup> indoor space, 7m height, only ground level and no shop opens exterior, all of its shop interior sided, 38 500m<sup>2</sup> open-air car park and it is located at 165 000 m<sup>2</sup> in total.

From bus terminal to shopping mall all along the way remarkably good environment, nice view and fresh air can leap to the eye. In the area since natural gas is used for warming SO<sub>2</sub> ratio is fairly low, on the other hand since there are no forest or woods around PM<sub>10</sub> ratio is high [3]. It

is at cross center of three streets and in the middle of dense building site. It services nearly 40 000 people living in 270ha area. Population density is 148 person/ha. There is no free transportation service for customers.

At east there are dispensary and street fronted workplaces, at southeast there are a stadium with 42 000 capacity and Olympic swimming pools, at south there are;

- a) 3 X 3 750 m<sup>2</sup> area KP,
- b) 2X4 200 m<sup>2</sup> area KK,
- c) 2X1 450 m<sup>2</sup> area MKR,
- d) Business Centers,

at southwest there is Selcuklu municipality building, at west there are Konya bus terminal and total 7 500 m<sup>2</sup> area MST whose apartments' ground levels are workplaces. The mall is surrounded by apartments with 7 to 13 storey.

In near surrounding area there are 3 hypermarkets, 5 educational facility and a hospital. Total workplaces inside are 84 and total rentable are is 41 000 m<sup>2</sup>. Shops in mall consist of local, national and international brands (Map 1).



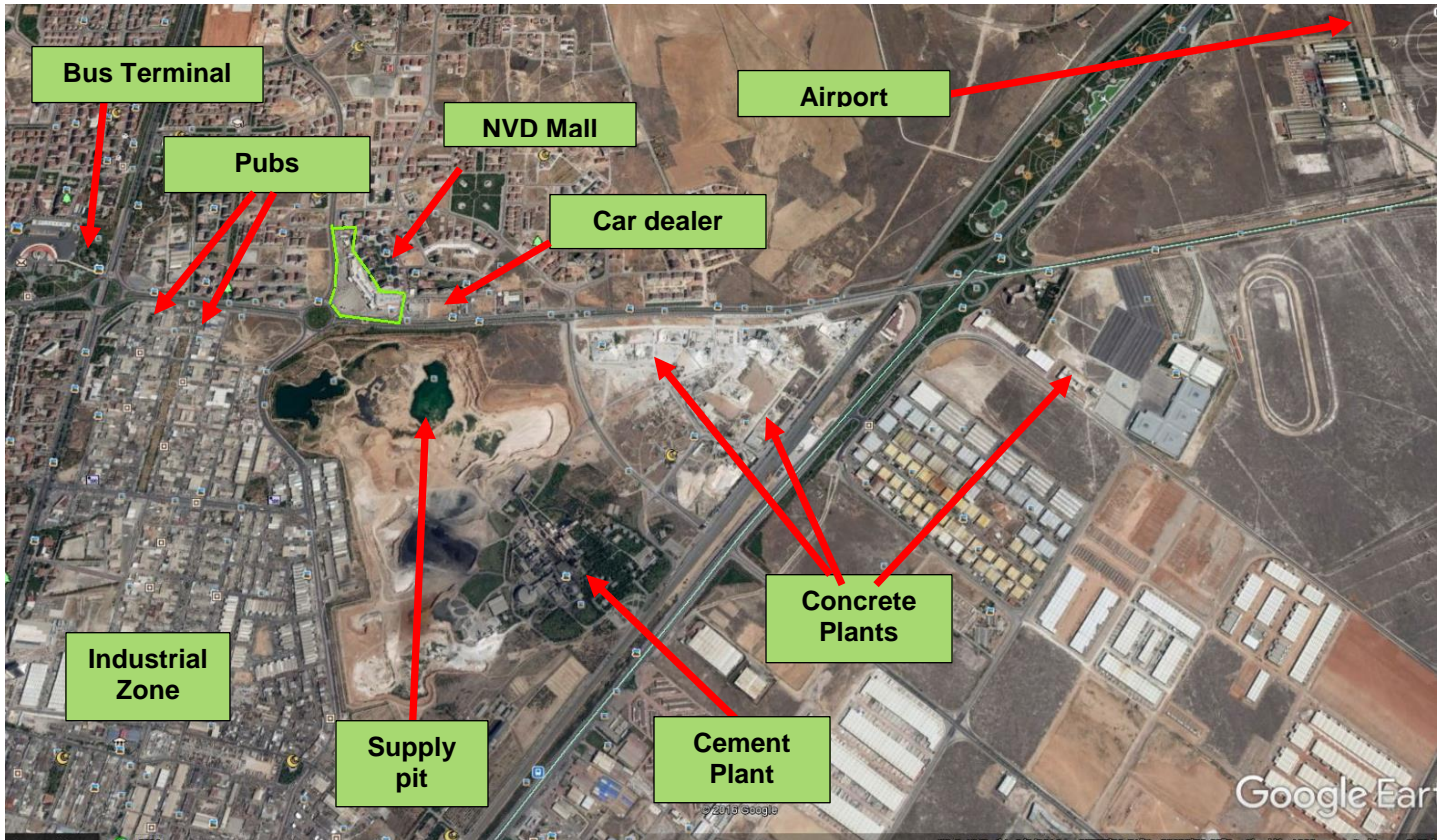
Map 1: Surroundings of M1RL shopping mall

## 2.2 NVD shopping mall

It is opened in June 2015. It consists of ferro-concrete columns and beams and reflects today's modern architecture. Located 12 km northeast of Konya city center, it has 3 x 15 000 m<sup>2</sup> + 4 000 m<sup>2</sup> indoor area, 3 storeys, some workplaces at ground level fronted exterior, the others

fronted interior, 10 000 m<sup>2</sup> open-air, 8 000 m<sup>2</sup> underground car park and it is located at 48 000 m<sup>2</sup> in total.

In the area since natural gas is used for warming SO<sub>2</sub> ratio is fairly low, on the other hand since there are no forest or woods around, PM<sub>10</sub> ratio is high [3]. The street it is located in is populated 27 200 and population density is 49 person/ha (Map 2). The mall has free transportation service for its customers.



Map 2: Surroundings of NVD shopping mall

At north and northeast there are 13 storey apartment blocks, a public institution, and a community clinic, at east there is a car dealer, a gas station and 2 km ahead airport border, at southeast there are concrete plants and 2 km ahead organized industrial zone border, at south there is a supply pit of cement plant (since it is filled with water it can be seen as a pond) and a cement plant, at southwest there are street fronted pubs and behind them industrial zone, at west there are 13 storey apartment blocks and Konya bus terminal. On both sides of the way laying at west, there are ground level workplaces.

In near surrounding area there are 3 hypermarkets, 5 educational facilities, a public institution and a community clinic. Shops in mall consist of local, national and international brands.

### 3. SALE AND RENTAL PRICES OF WORKPLACES IN SHOPPING MALLS

M1RL shopping mall management adopted the method of renting the workplaces inside the mall instead of property sale. The shopping mall consists of only ground level and indoor. For this reason there is no difference between workplaces because of level difference or outdoor attraction. There are 4 main entrance door for customers and workplaces are located at sides and middle block so in architectural project corners are generated and it is an exact rectangle shape building. 26 corners are generated and since middle block fronts are held short there is no exaggerated location differences yet workplace areas are much different in size (22 – 10 000 m<sup>2</sup>). For this reason workplaces needing larger areas and serve large amount of people are given blind facades.

NVD shopping mall management both sales properties and rents for guaranteed customer. Mall is designed as 1 basement, 3 full level and 1 half terrace because of mall location's parcel's narrowness. Building has two main entrance and is shaped as a bow headed towards southwest. The ground level workplaces which are confectionery and café are two fronted as facing car park one way and indoor the other way, however, the other workplaces at ground level and other levels are one fronted, only interior. Attraction centers are occurred at the crescent's corners where stairs are located. When considered the ones at ground level two fronted and one fronted at top level, the superiority of location is very high. Though the area sizes are not as different as in M1RL (70 – 2 500 m<sup>2</sup>)

The data which will be basis of valuation is shown in Table 1.

In table 2 rental and sale values of m<sup>2</sup> are given with workplace owners for both shopping malls. Since M1RL shopping mall consists of only ground level and interior fronted workplaces, at NVD data of workplaces, which have same properties at ground level and interior fronted, will be used. Both shopping malls have adopted the policy of corporate rental system and are charging %20 extra for common expenditures (security, cleaning, maintenance, repairs, raffles, car park ...).

M1RL holds the property of workplaces and rents them by itself. For this reason, for valuation of the workplaces in shopping mall, sale values of workplaces located opposite of the mall which are in total 22 550 m<sup>2</sup> and local real estate agents are taken into consideration. NVD on the other hand haven't set any limit to sales or rentals. However it manages the mall as corporate.

Table 1: Comparison of Real and Novada shopping malls (attractional and locational)

Data	M1RL Shopping Mall	NVD Shopping Mall
Mall area (m <sup>2</sup> )	58 500	(3x15 000) + 4 000
Mall perimeter (m)	1260	746
Car park area (m <sup>2</sup> )	38 500	10 000 + 8 000
Distance to Bus Terminal intersection (m)	1 600	1 200
Distance to Bus Terminal (m)	1 280	1 600
Number of Storeys	Only ground floor	<ul style="list-style-type: none"> <li>• ½ Basement,</li> <li>• 3 storeys,</li> <li>• ½ Mezzanine</li> </ul>
Street Name	Yazır	Sancak
Street population (person)	44 850	27 200
Street area (ha)	737	560
Population Structure	-	-
05 – 14 age	7 500	4 500
15 – 19 age	4 180	2 540
20 – 29 age	8 050	4 840
30 – 44 age	10 120	6 110
Population density (person/ha)	60,85	48,57
Surrounding markets	<ul style="list-style-type: none"> <li>• Adese,</li> <li>• Makro,</li> <li>• Sincap</li> </ul>	<ul style="list-style-type: none"> <li>• Akmar,</li> <li>• Kavruk,</li> <li>• Sincap</li> </ul>
Surrounding educational facilities	<ul style="list-style-type: none"> <li>• Primary school,</li> <li>• Preschool,</li> <li>• Study center (2),</li> <li>• High school (2)</li> </ul>	<ul style="list-style-type: none"> <li>• Primary school,</li> <li>• Middle school,</li> <li>• High school (2)</li> </ul>
Surrounding business centers	<ul style="list-style-type: none"> <li>• Mustafaş,</li> <li>• Kızılkaya,</li> <li>• Konya Park</li> </ul>	-
Surrounding attraction centers	<ul style="list-style-type: none"> <li>• Football stadium (42 000 capacity),</li> <li>• Selçuklu Municipality building,</li> <li>• Dispensary,</li> <li>• Olympic swimming pool</li> </ul>	<ul style="list-style-type: none"> <li>• Airport,</li> <li>• Organized industrial zone,</li> </ul>
Front direction	North – West	North - West
Prevailing Wind Direction	West to east	Northwest to southeast
Air pollution	<ul style="list-style-type: none"> <li>• SO<sub>2</sub> =7,1 Mg/m<sup>3</sup> ( must be &lt;350),</li> <li>• PM<sub>10</sub> =81,3 Mg/m<sup>3</sup> (must be &lt;50)</li> </ul>	<ul style="list-style-type: none"> <li>• SO<sub>2</sub> =16,50 Mg/m<sup>3</sup> (must be &lt;350),</li> <li>• PM<sub>10</sub> =108,00 Mg/m<sup>3</sup> (must be &lt;50)</li> </ul>

Table 2: Sale and rental values in shopping malls

Floor		M1RL		NVD	
Floor	Area (m <sup>2</sup> )	Rent (TL/m <sup>2</sup> )	Sale (TL/m <sup>2</sup> )	Rent (TL/m <sup>2</sup> )	Sale (TL/m <sup>2</sup> )
Ground	<50	260	20 000	90	17 000
	50<100	240	18 500	80	15 000
	100+	200	13 000	65	12 000
1 <sup>st</sup> Floor	<50	-		80	15 500
	50<100	-		70	13 000
	100+	-		55	10 000
2 <sup>nd</sup> Floor	<50	-		70	13 000
	50<100	-		60	11 000
	100+	-		50	8 000

#### 4 VALUATION CALCULATION AND RESULT

While valuing a real estate, the most important factor is its “market value”. The estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm’s-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion [4].

Coefficient comparison or other market comparison should be sourced by observations of the market. Income method should base on cash flow determined by market and return ratio obtained from market. Building cost and amortization should be determined via an analysis done over market based guesses of cost and accumulative amortization [5].

Environmental depreciation is a loss in value sourced by external factors. These effects can be permanent or temporary. For instance noise, water and air pollution, raise in crime, having no car park at area, traffic jam etc. are caused by external effects therefore they cannot be eliminated. Environmental depreciation effects are mostly cannot be eliminated because they are occurring without our effect.

Environmental depreciation affects building and land value. For this, effects of environmental depreciation to building and land value should be separated. To do that, building and land value portion inside premises value is determined. Effect is that ratio. Environmental depreciation can be determined via contrastive and income methods with the help of market data. Income loss sourced by environmental depreciation is capitalized, while income method is used. Environmental depreciation can be at a premises located at a natural disaster zone [6].

To calculate environmental depreciation table 3 can be used which is prepared based on the data at table 2.

When Table 3 is scrutinized, it is seen that M1RL shopping mall is 2.5 times more valuable than NVD shopping mall according to k capitalization, 3 times more valuable according to rent value. We may see the reason as environmental at first sight. However, according to population density M1RL shopping mall is in 3.02 times more crowded area than NVD shopping mall is in.



Table 3: k capitalization and ratios

FLOOR		M1RL	NVD	Ratios (M1RL/NVD)			
Floor	Area (m <sup>2</sup> )	k=G <sub>net</sub> /D <sub>sale</sub>	k=G <sub>net</sub> /D <sub>sale</sub>	k	Rent	Sale	Population Density
Ground	<50	0,156	0,063	2,48	2,89	1,18	3,02
	50<10	0,156	0,064	2,44	3,00	1,23	
	100+	0,185	0,071	2,61	3,08	1,08	
1 <sup>st</sup> floor	<50		0,061				
	50<10		0,065				
	100+		0,066				
2 <sup>nd</sup> floor	<50		0,065				
	50<10		0,065				
	100+		0,075				

From this aspect, one can say that bad neighborhood effect to workplaces inside shopping mall of

- a) Concrete plants
- b) Supply pit of cement plant (filled with water, seen as a pond),
- c) Pubs fronted to main way,
- d) Industrial zone behind the pubs

which are located at southeast, south and southwest of NVD shopping mall, has no negative effect.

In master thesis study, researching sale and rental prices of houses around the both shopping malls, the ones around M1RL are found 1.3 times more valuable than the ones around NVD shopping mall. In this study, it is researched that whether there is same negativity upon the workplaces inside shopping mall. When the data in Table 2 is taken into consideration one can pass judgement on these facts;

- a) It can be said that M1RL shopping mall is 1.2 times more valuable than NVD shopping mall according to workplace sale value.
- b) NVD shopping mall is 2.5 times more valuable than M1RL shopping mall when k capitalization is taken into consideration(property owning).
- c) Population density of M1RL shopping mall's location is 3 times more than the one of NVD shopping mall's location.
- d) M1RL shopping mall is approximately 3 times more valuable than NVD shopping mall according to rentals.

When these all are taken into consideration, bad neighborhood of NVD shopping mall has no negative effect on workplaces inside the mall.

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## BIOGRAPHICAL NOTES

Dr. Mehmet Ertaş, born in 1965 and graduated in 1989 as Dipl. Eng. in Surveying from Selcuk University and completed doctorate degree in 2000 at the Technical University of Istanbul. He worked as Surveying Engineer between 1990 and 1993 in Municipality of Konya. He has been working as Lecturer in Mapping and Surveying Department of Higher School of Vocational and Technical Sciences of Selcuk University.

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