

Regional Economic Models, Inc.

Economic Impact of Shopping Center Developments

Final Report

Prepared for

International Council of Shopping Centers

Ву

REMI Consulting, Inc.

Using

REMI Policy Insight Three-Region EDFS-23 Model

January 9, 2006

TABLE OF CONTENTS

TABLE OF CONTENTS	2
1. Executive Summary	3
Major Findings	
2. Methodology & Assumptions	15
2-1 REMI Policy Insight	
2-2 Assumptions	
2-3 Simulation Inputs	
3. Results	23
About REMI	28
Appendix	29

1. Executive Summary

The International Council of Shopping Centers (ICSC) contracted Regional Economic Models, Inc. (REMI) to perform an economic assessment of shopping center developments in three regional economies within the United States. A shopping center, as defined by ICSC, is 'a group of retail and other commercial establishments that is planned, developed, owned and managed as a single property, with on-site parking provided. The center's size and orientation are generally determined by the market characteristics of the trade area served by the center. The three main physical configurations of shopping centers are malls, open-air centers, and hybrid centers.' The focus of the study is on analyzing the economic benefits to these economies of new shopping center development. ICSC supplied REMI with specific details for three economic regions (Metropolitan Statistical Area (MSA), City Area, Suburb Area)², and 4 types of shopping centers (Regional Mall, Power Center, Lifestyle Center, and Community Center). Expenditures on construction and equipment during the construction phase, and employment during the operational phase, differed by economic region and type of shopping center³.

ICSC asked REMI to model the total economic impacts in three distinct regional economies associated with various levels of site investment and operational employment. To quantify the indirect and induced effects of such developments, REMI captured all direct effects of the developments, including:

- Sales increases to regional construction firms with in-region supply at 100%.
- Sales increases to local equipment manufacturing firms with in-region supply at 50%.
- Operational employment increases for retail, management, and administrative services.

REMI examined the above scenarios using a 23-industry sector, three-region model. While using this model, REMI developed an underlying baseline forecast and thirty-six (36) alternative forecasts for the various economies. Alternative forecasts modeled by REMI show the total net effects of shopping center construction and equipping, and operational employment, independent of one another. Twenty-four (24) of these simulations examined two differing operational concepts for comparison purposes: one with market-place competition, and one without market-place competition. By analyzing these developments with different underlying assumptions for the regional market place, REMI established a realistic range of potential outcomes.

Data for the analysis was provided by ICSC, who provided REMI with projections of total shopping-center-site development costs and employment.

¹ Source: ICSC. ICSC Shopping Center Definitions. Basic Configurations and Types for the United States.

² For this study a "MSA" would be a major city like San Francisco, St. Louis, Chicago, Philadelphia, etc. Examples of a "city" area would be Tuscon, Fresno, Wichita, Austin, etc. Examples of a "suburban area" would be Lowell, MA, Novi, MI, Santa Cruz, CA, Daytona Beach. FL. etc.

³ The Median Center Size was taken from a sample of centers from the Directory of Major Mall Database. We sampled 90 centers from each category with 30 from each geographic region. For example, we took 30 power centers in different MSAs, 30 power centers from different city areas, and 30 power centers from suburban areas. This median center sizes were used consistently for all total employment and sales calculations.

Major Findings

Tables contained at the end of this section summarize the economic growth in Year 1, Year 2, Year 3, Year 4, and Year 5, with five year spreads continuing out to Year 25 in the MSA, City, and Suburb Areas due to Regional Mall, Power Center, Lifestyle Center, and Community Center developments and operations. Definitions for the four types of shopping centers are contained below, with details supplied in the appendix.⁴

Regional Mall: This center type provides general merchandise (a large percentage of which is apparel) and services in full depth and variety. Its main attraction is the combination of anchors, which may be traditional, mass merchant, discount, or fashion department stores, with numerous fashion oriented specialty stores. A typical regional center is usually enclosed with an inward orientation of the stores connected by a common walkway. Parking surrounds the outside perimeter.

Power Center: A center dominated by several large anchors, including discount department stores, off-price stores, warehouse clubs, or "category killers," i.e., stores that offer a vast selection in related merchandise categories at very competitive retail prices. The center typically consists of several anchors, some of which may be freestanding (unconnected) and only a minimum amount of small specialty tenants.

Lifestyle Center: Most often located near affluent residential neighborhoods, this center type caters to the retail needs and "lifestyle" pursuits of consumers in its trading area. It has an open-air configuration and typically includes at least 50,000 square feet of retail space occupied by upscale national chain specialty stores. Other elements differentiate the lifestyle center in its role as a multipurpose leisure-time destination, including restaurants, entertainment, and design ambience and amenities such as fountains and street furniture that are conducive to casual browsing. These centers may be anchored by one or more conventional or fashion specialty department stores.

Community Center: A community center typically offers a wider range of apparel and other soft goods than the neighborhood center. Among the more common anchors are supermarkets, super drugstores, and discount department stores. Community center tenants sometimes contain value-oriented big-box category-dominant retailers selling such items as apparel, home improvement/furnishings, toys, electronics or sporting goods. The center is usually configured in a straight line as a strip, or may be laid out in an L or U shape, depending on the site and design. Of the eight center types, community centers encompass the widest range of formats. For example, certain centers that are anchored by a large discount department store often have a discount focus. Others with a high percentage of square footage allocated to off-price retailers can be termed offprice centers.

Construction of a new shopping center, in conjunction with the operational employment at the center, stimulates positive growth in the regional economy. The total net impact of the operational employment is modeled under two different assumptions: with and without market-place displacement effects. If a retailer moves in that supplies a market where it does not compete with other firms in the area, the results will be affected by the percent of local inputs used, and will not

-

⁴ Source: ICSC, please see appendix for details

displace the activity of other, previously established, retailers. However, this assumption needs to be counterbalanced with a series of alternative runs to determine the total net effect of shopping-center developments and operations with displacement. By providing a range of outcomes, the analysis is more sound and informative. Constructing and equipping the sites is assumed to occur without market-place displacement.

The three economic regions that ICSC designated as the areas of study are regionally distinct, essentially making them one of a kind. Listed below are factors that make the areas distinct from each other as well as from other areas in the United States and abroad.

- Regional Purchase Coefficient (ratio of local demand that is self supplied in region), by industry type
- Trade shares, measured by imports and exports, to contiguous and non-contiguous areas
- Absolute Size
- Industry Composition
- Wage Rates
- Labor Productivity
- Participation Rates
- Relative Employment Opportunities

Economies of different size and composition experience various levels of growth throughout the period of analysis, due to these region-distinct characteristics. Strong growth in employment, largely in the construction, manufacturing, and service sectors, results from site investment and direct employment at the various centers. Job seekers that find work in these industries are compensated at the regional average wage rates and are the largest contributors to the increase in Real Disposable Income (the increase in Real Disposable Income directly affects the increase in consumption). Please see section 2 for a detailed description of the results.

Economic and demographic impacts can be observed in three distinct phases; construction, short-term operations, and long-term operations. The short-term, single year, construction-phase impact creates a high number of jobs in that year due to the increased demands within the construction industry and in a number of manufacturing industries that supply the shopping centers with producers durable equipment. The construction and equipping phase captures all capital investments that are made in an area in a single year (Year 1). The construction phase is a temporary, yet very important, contribution to these economic regions, bringing immediate impacts. Longevity of economic returns is another important factor when evaluating development policies. In the years that follow the construction phase, positive economic growth in the short-term and long-term phases illustrate the net gains, which the regions will reap due to direct employment increases at a variety of centers. The results featured in Tables 1-12 are the total net effects of the direct stimulus plus indirect and induced economic effects.

Regional Mall

Without Market Competition

						YR 6-	YR 11-	YR 16-	YR 21-
MSA	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	2536	2526	2505	2480	2457	2422	2435	2492	2553
Output (Mil 96\$)	198.8	200.2	200.7	200.9	201.8	1048.6	1180.4	1369.0	1 <i>5</i> 8 <i>5.7</i>
GRP (Mil 96\$)	121.5	124.6	126.6	128.0	129.5	678.3	<i>7</i> 61. <i>7</i>	876.9	1008.9
Population (Last Year of Phase)	384	683	926	1128	1296	1837	235	274	316
Real Disp Pers Inc (Mil 96\$)	29.1	31.0	32.9	34.5	35.9	200.1	2107.0	2244.0	2306.0

						YR 6-	YR 11-	YR 16-	YR 21-
City Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	3001	3149	3249	3313	3357	3449	3586	3728	3882
Output (Mil 96\$)	246.8	264.7	277.8	287.6	296.0	1599.2	1839.3	2143.9	2503.9
GRP (Mil 96\$)	147.4	161.4	172.2	180.8	188.2	1035.4	1195.0	1383.2	1600.0
Population (Last Year of Phase)	627	1168	1646	2067	2436	3702	4369	4714	4886
Real Disp Pers Inc (Mil 96\$)	56.1	63.4	70.1	75.6	80.4	460.9	548.2	636.8	734.1

						YR 6-	YR 11-	YR 16-	YR 21-
Suburb Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	1234	1239	1235	1225	1216	1201	1215	1255	1301
Output (Mil 96\$)	119.7	122.3	123.4	124.0	124.7	649.7	734.9	858.4	1003.7
GRP (Mil 96\$)	71.9	74.0	75.2	76.0	76.9	403.3	456.5	531.7	619.2
Population (Last Year of Phase)	181	319	430	520	594	820	933	987	1006
Real Disp Pers Inc (Mil 96\$)	20.4	21.7	22.8	23.7	24.5	133.4	153.2	176.5	202.2

^{*} Average Employment

Regional Mall

With Market Competition

						YR 6-	YR 11-	YR 16-	YR 21-
MSA	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	782	<i>7</i> 81	777	772	767	<i>7</i> 61	770	790	810
Output (Mil 96\$)	62.6	63.3	63.7	64.0	64.5	337.6	382.7	444.8	515.6
GRP (Mil 96\$)	38.4	39.5	40.3	40.9	41.4	218.9	247.6	285.8	329.1
Population (Last Year of Phase)	118	210	284	346	398	565	649	692	711
Real Disp Pers Inc (Mil 96\$)	9.1	9.7	10.2	10.7	11.1	61.7	72.2	84.1	97.2

						YR 6-	YR 11-	YR 16-	YR 21-
City Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	278	291	299	305	308	316	326	336	349
Output (Mil 96\$)	24.0	25.6	26.8	27.7	28.5	153.8	1 <i>7</i> 6.1	204.3	237.3
GRP (Mil 96\$)	14.5	15.8	16.8	17.6	18.3	100.4	115.3	132.8	153.0
Population (Last Year of Phase)	53	100	141	176	208	315	371	399	412
Real Disp Pers Inc (Mil 96\$)	5.4	6.0	6.5	7.0	7.4	42.2	49.7	<i>57</i> .1	65.3

						YR 6-	YR 11-	YR 16-	YR 21-
Suburb Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	1 <i>77</i>	178	1 <i>7</i> 8	1 <i>77</i>	1 <i>77</i>	176	179	186	193
Output (Mil 96\$)	18.3	18.8	19.1	19.3	19.5	102.8	116.9	136.3	159.4
GRP (Mil 96\$)	11.3	11.6	11.9	12.1	12.3	65.1	74.1	86.2	100.4
Population (Last Year of Phase)	26	46	61	74	85	119	136	143	146
Real Disp Pers Inc (Mil 96\$)	3.1	6.6	6.9	7.2	7.4	20.5	23.6	27.1	31.0

^{*} Average Employment

Power Center

Without Market Competition

						YR 6-	YR 11-	YR 16-	YR 21-
MSA	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	330	328	325	322	319	314	316	322	330
Output (Mil 96\$)	26.1	26.3	26.4	26.4	26.5	137.8	155.1	179.8	208.3
GRP (Mil 96\$)	16.0	16.4	16.6	16.8	17.0	89.1	100.1	115.2	132.5
Population (Last Year of Phase)	49	88	120	145	167	235	268	284	290
Real Disp Pers Inc (Mil 96\$)	3.8	4.0	4.3	4.5	4.7	25.9	30.1	35.0	40.3

						YR 6-	YR 11-	YR 16-	YR 21-
City Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	362	380	392	400	405	416	432	450	469
Output (Mil 96\$)	30.0	32.1	33.7	34.9	35.9	194.0	223.3	260.6	304.4
GRP (Mil 96\$)	17.9	19.6	20.9	22.0	22.9	125.7	145.2	168.1	194.6
Population (Last Year of Phase)	75	140	198	248	292	444	525	568	589
Real Disp Pers Inc (Mil 96\$)	6.8	7.6	8.4	9.1	9.7	55.3	66.0	76.7	88.3

						YR 6-	YR 11-	YR 16-	YR 21-
Suburb Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	372	373	372	369	366	362	366	378	391
Output (Mil 96\$)	36.3	37.1	37.5	37.6	37.9	197.9	223.9	261.3	305.6
GRP (Mil 96\$)	21.8	22.5	22.8	23.1	23.4	122.8	139.1	161.8	188.6
Population (Last Year of Phase)	54	96	129	156	179	247	280	295	300
Real Disp Pers Inc (Mil 96\$)	6.2	6.6	6.9	7.2	7.4	40.4	46.4	53.3	61.2

^{*} Average Employment

Power Center

With Market Competition

						YR 6-	YR 11-	YR 16-	YR 21-
MSA	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	104	104	103	103	102	101	102	104	107
Output (Mil 96\$)	8.5	8.6	8.7	8.7	8.8	45.9	52.0	60.4	70.1
GRP (Mil 96\$)	5.2	5.4	5.5	5.6	5.6	29.7	33.6	38.8	44.8
Population (Last Year of Phase)	15	27	37	45	52	73	83	88	90
Real Disp Pers Inc (Mil 96\$)	1.2	1.3	1.4	1.5	1.5	8.1	9.3	10.9	12.7

						YR 6-	YR 11-	YR 16-	YR 21-
City Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	36	37	38	39	39	40	41	42	44
Output (Mil 96\$)	3.2	3.4	3.6	3.7	3.8	20.4	23.3	26.9	31.1
GRP (Mil 96\$)	1.9	2.1	2.2	2.3	2.4	13.3	15.3	1 <i>7</i> .5	20.1
Population (Last Year of Phase)	6	12	1 <i>7</i>	21	25	37	44	47	49
Real Disp Pers Inc (Mil 96\$)	0.7	0.8	0.9	0.9	0.9	5.3	6.5	7.5	8.2

						YR 6-	YR 11-	YR 16-	YR 21-
Suburb Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	53	53	53	53	53	53	53	55	58
Output (Mil 96\$)	5.6	5.8	5.9	5.9	6.1	32.0	36.3	42.3	49.6
GRP (Mil 96\$)	3.5	3.6	3.6	3.7	3.8	20.2	23.0	26.8	31.3
Population (Last Year of Phase)	8	14	18	22	25	36	40	42	43
Real Disp Pers Inc (Mil 96\$)	0.9	1.0	1.1	1.1	1.2	6.3	7.0	7.7	8.6

^{*} Average Employment

Lifestyle Center

Without Market Competition

						YR 6-	YR 11-	YR 16-	YR 21-
MSA	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	1130	1125	1116	1105	1094	1078	1083	1108	1135
Output (Mil 96\$)	88.7	89.3	89.5	89.7	90.1	468.1	527.3	612.0	709.4
GRP (Mil 96\$)	54.1	55.5	56.3	57.0	57.6	302.0	339.2	391.0	450.2
Population (Last Year of Phase)	170	302	409	498	572	809	926	986	1011
Real Disp Pers Inc (Mil 96\$)	12.8	13.7	14.5	15.2	15.9	88.2	103.4	120.4	138.7

						YR 6-	YR 11-	YR 16-	YR 21-
City Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	1066	1119	1155	1178	1194	1227	1276	1328	1383
Output (Mil 96\$)	87.4	93.8	98.4	101.9	104.9	566.9	652.5	<i>7</i> 61.0	889.2
GRP (Mil 96\$)	52.1	<i>57</i> .1	61.0	64.0	66.6	366.8	423.7	490.7	567.7
Population (Last Year of Phase)	224	418	589	739	872	1324	1565	1690	1752
Real Disp Pers Inc (Mil 96\$)	19.9	22.5	24.9	26.8	28.5	163.7	195.0	226.6	261.3

						YR 6-	YR 11-	YR 16-	YR 21-
Suburb Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	993	997	993	985	978	966	977	1009	1046
Output (Mil 96\$)	95.8	97.9	98.9	99.3	99.9	520.4	588.6	687.3	803.5
GRP (Mil 96\$)	57.4	59.1	60.1	60.7	61.4	322.2	364.8	424.8	494.7
Population (Last Year of Phase)	145	257	346	418	477	659	750	792	808
Real Disp Pers Inc (Mil 96\$)	16.3	17.4	18.3	19.0	19. <i>7</i>	107.1	123.0	141.6	162.1

^{*} Average Employment

Lifestyle Center

With Market Competition

						YR 6-	YR 11-	YR 16-	YR 21-
MSA	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	353	353	351	348	346	343	347	356	365
Output (Mil 96\$)	28.4	28.7	28.9	29.0	29.3	153.4	174.0	202.4	234.8
GRP (Mil 96\$)	17.4	17.9	18.2	18.5	18.8	99.2	112.3	129.8	149.5
Population (Last Year of Phase)	53	94	127	155	1 <i>77</i>	251	287	306	313
Real Disp Pers Inc (Mil 96\$)	4.1	4.3	4.6	4.8	4.9	27.4	31.9	37.2	42.9

						YR 6-	YR 11-	YR 16-	YR 21-
City Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	94	99	102	104	106	109	112	11 <i>7</i>	122
Output (Mil 96\$)	7.9	8.5	8.9	9.2	9.5	51.2	58.7	68.5	79.8
GRP (Mil 96\$)	4.7	5.2	5.5	5.8	6.1	33.3	38.4	44.3	51.2
Population (Last Year of Phase)	19	36	51	63	75	114	134	146	152
Real Disp Pers Inc (Mil 96\$)	1.8	2.0	2.2	2.4	2.5	14.5	17.1	20.1	23.3

						YR 6-	YR 11-	YR 16-	YR 21-
Suburb Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	138	140	139	139	139	138	141	146	152
Output (Mil 96\$)	14.1	14.5	14.7	14.9	15.0	79.3	90.4	105.9	124.1
GRP (Mil 96\$)	8.6	8.9	9.1	9.2	9.4	49.9	57.0	66.5	77.7
Population (Last Year of Phase)	20	36	48	58	67	95	109	115	118
Real Disp Pers Inc (Mil 96\$)	2.4	2.5	2.7	2.8	2.9	15.8	18.2	20.9	24.0

^{*} Average Employment

Community Center

Without Market Competition

						YR 6-	YR 11-	YR 16-	YR 21-
MSA	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	452	450	447	442	438	431	433	443	454
Output (Mil 96\$)	36.4	36.7	36.8	36.9	37.1	192.8	217.1	251.7	291.6
GRP (Mil 96\$)	22.3	22.9	23.3	23.6	23.8	125.0	140.5	161 <i>.</i> 7	186.1
Population (Last Year of Phase)	68	121	164	199	228	322	369	392	401
Real Disp Pers Inc (Mil 96\$)	5.3	5.6	5.9	6.2	6.5	35.8	41.8	48.7	56.2

						YR 6-	YR 11-	YR 16-	YR 21-
City Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	656	688	710	724	733	<i>75</i> 3	782	812	845
Output (Mil 96\$)	54.4	58.4	61.2	63.3	65.2	351.9	404.6	471.5	550.1
GRP (Mil 96\$)	32.6	35.6	38.0	39.8	41.5	228.1	263.1	304.5	352.0
Population (Last Year of Phase)	136	253	356	447	527	800	944	1018	1055
Real Disp Pers Inc (Mil 96\$)	12.3	13.9	15.3	16.5	17.5	100.4	119.5	138.2	158.9

						YR 6-	YR 11-	YR 16-	YR 21-
Suburb Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	538	540	538	534	530	523	529	546	566
Output (Mil 96\$)	53.2	54.4	55.0	55.2	55.6	290.0	328.0	382.8	447.5
GRP (Mil 96\$)	32.1	33.0	33.6	33.9	34.4	180.4	204.3	237.8	276.9
Population (Last Year of Phase)	78	139	187	226	258	356	404	426	434
Real Disp Pers Inc (Mil 96\$)	9.0	9.6	10.1	10.5	10.8	59.1	67.5	77.3	88.4

^{*} Average Employment

Community Center

With Market Competition

						YR 6-	YR 11-	YR 16-	YR 21-
MSA	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	144	143	143	142	141	139	141	145	148
Output (Mil 96\$)	12.1	12.2	12.3	12.4	12.5	65.5	74.2	86.4	100.2
GRP (Mil 96\$)	7.5	7.7	7.8	8.0	8.1	42.7	48.3	55.8	64.3
Population (Last Year of Phase)	21	38	51	62	71	101	115	122	124
Real Disp Pers Inc (Mil 96\$)	1.7	1.8	1.9	2.0	2.1	11.4	13.2	15.6	18.4

						YR 6-	YR 11-	YR 16-	YR 21-
City Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	67	70	<i>7</i> 1	72	73	74	76	78	81
Output (Mil 96\$)	6.1	6.5	6.8	7.0	7.2	38.6	44.1	51.1	59.4
GRP (Mil 96\$)	3.7	4.1	4.3	4.5	4.6	25.4	29.1	33.4	38.6
Population (Last Year of Phase)	11	21	30	37	44	67	78	85	89
Real Disp Pers Inc (Mil 96\$)	1.3	1.5	1.6	1.6	1.7	9.9	11.7	13.4	15.4

						YR 6-	YR 11-	YR 16-	YR 21-
Suburb Area	YR 1	YR 2	YR 3	YR 4	YR 5	YR 10*	YR 15*	YR 20*	YR 25*
Employment	79	79	79	79	79	79	80	83	86
Output (Mil 96\$)	8.8	9.0	9.2	9.2	9.4	49.9	56.5	66.0	<i>77</i> .3
GRP (Mil 96\$)	5.4	5.6	5.7	5.8	6.0	31.8	36.1	42.1	49.1
Population (Last Year of Phase)	11	20	27	33	37	52	59	62	65
Real Disp Pers Inc (Mil 96\$)	1.5	1.6	1.7	1.7	1.8	9.6	10.6	12.1	13.7

^{*} Average Employment

Investment Results, Year 1

Regional Mall Construction and Equipment

	MSA Area	City Area	Suburb Area
Employment	966	1208	572
Output (Mil Fixed 96\$)	121.4	138.8	94.4
GRP (Mil Fixed 96\$)	59.0	69.5	45.9
Population (Last Year of Phase)	130	235	84
Real Disp Pers Inc (Mil Fixed 96\$)	20.6	32.4	17.4

Power Center Construction and Equipment

	MSA Area	City Area	Suburb Area
Employment	431	454	312
Output (Mil Fixed 96\$)	54.1	52.1	51.5
GRP (Mil Fixed 96\$)	26.3	26.1	25.1
Population (Last Year of Phase)	58	88	46
Real Disp Pers Inc (Mil Fixed 96\$)	9.2	12.2	9.5

Lifestyle Center Construction and Equipment

	MSA Area	City Area	Suburb Area
Employment	289	486	320
Output (Mil Fixed 96\$)	36.3	55.8	52.8
GRP (Mil Fixed 96\$)	17.6	27.9	25.7
Population (Last Year of Phase)	39	94	47
Real Disp Pers Inc (Mil Fixed 96\$)	6.2	13.0	9.8

Community Center Construction and Equipment

	MSA Area	City Area	Suburb Area
Employment	299	422	229
Output (Mil Fixed 96\$)	37.6	48.5	37.7
GRP (Mil Fixed 96\$)	18.3	24.3	18.4
Population (Last Year of Phase)	40	82	33
Real Disp Pers Inc (Mil Fixed 96\$)	6.4	11.3	7.0

2. Methodology & Assumptions

2-1 REMI Policy Insight

REMI Policy Insight[®] is the leading regional economic-forecasting and policy-analysis model. For this study, REMI developed Policy Insight for ICSC. REMI built this model using the REMI model building system, which consists of hundreds of programs developed over the last two decades. The system assembled the three-region EDFS-23 model using data from the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Department of Energy, the Bureau of Census, and other public sources.

REMI Policy Insight is a structural model, meaning that it clearly includes cause-and-effect relationships. The model is based on two key underlying assumptions from mainstream economic theory: households maximize utility and producers maximize profits. Since these assumptions make sense to most people and the structure is transparent, lay people as well as trained economists can understand the model.

In the model, businesses produce goods to sell to other firms, consumers, investors, governments and purchasers within and outside economic regions. The output is produced using labor, capital, fuel, and intermediate inputs. The demand for labor, capital and fuel per unit of output depends on their relative costs, since an increase in the price of any one of these inputs leads to substitution away from that input to other inputs. The supply of labor in the model depends on the number of people in the population and the proportion of those people who participate in the labor force. Economic migration affects the population size. People will move into an area if the real after-tax wage rates or the likelihood of being employed increases in a region.

Supply and demand for labor in the model determines the wage rates. These wage rates, along with other prices and productivity, determine the cost and opportunity of doing business for every industry in the model. An increase in costs would decrease the markets supplied by firms. This market share combined with the demand described above determines the amount of local output. The model has many other feedbacks. For example, changes in wages and employment impact income and consumption, while economic expansion changes investment, and population growth impacts government spending.

Figure 2-1 is a pictorial representation of REMI Policy Insight. The Output block shows a business that sells to all the sectors of final demand as well as to other industries. The Labor and Capital Demand block shows how labor and capital requirements depend both on output and their relative costs. The demographic block includes population and labor supply, contributing to demand and wage determination. Economic migrants in turn respond to wages and other labor market conditions. Supply and demand interact in the Wage, Price and Profit block. Relative production costs determine market shares. Output depends on market shares and the components of demand.

REMI Model Linkages (Excluding Economic Geography Linkages)

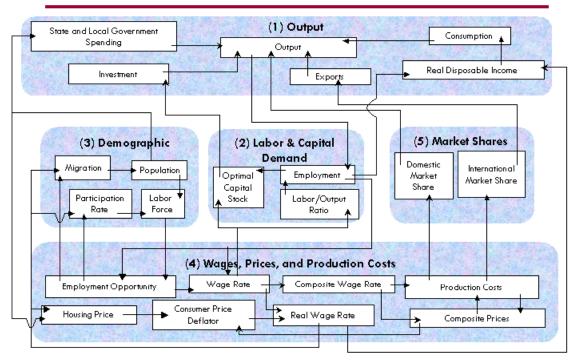


Figure 2-1 REMI Policy Insight overview

The REMI model brings together all of the above elements to determine the value of each of the variables in the model for each year in the baseline forecast, as well as for simulation purposes. The model includes all the inter-industry interactions that are included in input-output models in the Output block, but goes well beyond an input-output model by including the linkages among all of the other blocks shown in Figure 2-1.

In order to broaden the model in this way, it is necessary to estimate key relationships. This is accomplished by using extensive data sets covering all areas in the country. These large data sets and two decades of research efforts enable REMI to simultaneously maintain a theoretically sound model structure and build a model based on all the relevant data available.

The model has strong dynamic properties, which means that it forecasts not only what will happen but also when it will happen. This results in long-term predictions that have year-by-year changes. This means that the long-term properties of general equilibrium models are preserved while maintaining accurate annual predictions, using estimates of key equations from primary data sources.

Figure 2-2 shows the policy simulation process for a scenario called Policy X. The effects of a scenario are determined by comparing the baseline REMI forecast with an alternative forecast that incorporates the assumptions for the scenario. The baseline REMI forecast uses recent data and thousands of equations to generate projected economic activity for a particular region. The policy variables in the model are set equal to their baseline value (typically zero for additive variables and

one for multiplicative variables) when solving for the baseline forecast. To show the effects of a given scenario, these policy variables are given values that represent the direct effects of the scenario. The alternative forecast is generated using these policy variable inputs. Figure 2-2 shows how this process would work for a policy change called Policy X.

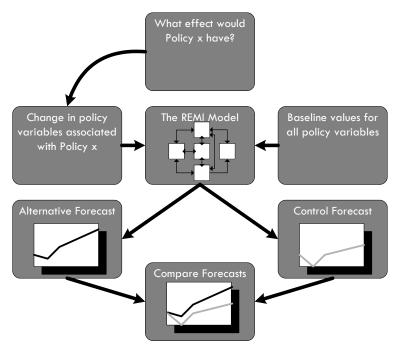


Figure 2-2 Policy X scenario

2-2 Assumptions

For this project, REMI examined the economic effects of shopping-center-site development and operations. Capital investments that are planned for the shopping centers and the likely availability of acquiring the capital within the regions specified by ICSC required REMI make a series of assumptions. The difficulty that REMI encountered when modeling in this framework was the need to quantify both the amount of the capital investments and the source of the capital. The details about the developments in the MSA Area, City Area, and Suburb Area are averages taken from a sample, as described in the executive summary. Other analysis of case-specific developments and utilization of different cost-per-square-foot estimates will result in different outcomes. REMI modeled simulations using several combinations of the following assumptions:

- 1. The capital investments begin and end in a single year (Year 1)
- 2. 100% of construction demand will be supplied from the local region without market displacement effects.
- 3. Construction Costs are \$75/Sqft in the MSA Area, and 10% less in City and Suburb Areas
- 4. 50% of equipment demand will be supplied from the local region without market displacement effects.
- 5. Developer Equipment Costs are \$18/Sqft
- 6. Retailer Equipment Costs are \$30/Sqft
- 7. Operational employment demand will remain constant throughout the 25-year horizon.
- 8. Wage rates are regional averages.
- 9. For twelve of the simulations, REMI assumed that operational employment will not have inregion market displacement.
- 10. For another twelve of the simulations, REMI assumed that operational employment will have inregion market displacement.

2-3 Simulation Inputs

The 36 scenarios that REMI modeled can be split into three distinct sets of twelve.

- The first set assessed the economic impact of developing the shopping-center sites.
- The second set assessed the economic impact of shopping-center operations without in-region market displacement.
- The third set assessed the economic impact of shopping-center operations *with* in-region market displacement.

All sets were modeled as separate actions. Combined runs were not performed.

The first set of data that REMI analyzed pertained to the construction and equipping of a Regional Mall, a Power Center, a Lifestyle Center, and a Community Center in the three economic regions. Construction costs are based on a square footage estimate supplied to REMI by ICSC, and documented in the Appendix. The Industry Sales variable contained within REMI Policy Insight was applied to simulate increases in Construction and Manufacturing output. For Simulation Inputs please see Table 2.1.

The second and third sets of data that REMI analyzed pertained to shopping-center operations. Operation-employment needs are also based on a square-footage estimate supplied to REMI by ICSC, and documented in the Appendix. The employees of these shopping centers typically fall into four categories; Retail, Management, Security, and Maintenance. ICSC provided employee-specific inputs by region and shopping-center type, translated into REMI Policy Insight inputs by REMI, as documented in the Appendix. For Simulation Inputs please see Table 2-2.

Industry Sales/Employment

REMI modeled significant increases in sales and employment in the construction, manufacturing, and retail-trade sectors through the industry-sales and employment variables, respectively. Constructing and equipping the various shopping centers is modeled as a completed process in a single year. Operational employment is modeled as a constant change above control forecast for a 25-year period. REMI Policy Insight is a complex economic forecasting tool that allows the user to enter situation-specific variable changes. The application of the Industry Sales and Industry Employment variables allows for changes in production of goods and services without local cannibalistic displacement effects. The decision to model without local competition for labor and market shares in the three regions was made based upon the assumption stated above, with a belief that latent demand for shopping opportunities exist, and the developments are satisfying market gaps.

Firm Employment

To provide a point of comparison, REMI modeled the exact same inputs for shopping-center operational employment by region and type using the firm employment variable. As in the Industry Employment scenarios, the change was entered as a constant change above baseline for a 25-year period. The application of the Firm Employment variable allows for changes in the production of goods and services with in-region cannibalistic displacement effects. The policy variable for firm employment is often used as an alternative to introducing additional dollars of output. The model contains regional labor productivity that converts between output increases and need for labor to produce such output. The decision to model with local competition for labor and market shares in the three regions was made based upon the need to provide a range of potential outcomes for the various operational estimates and regions, since no two economies are the same.

Table 2-1: Construction and Equipment

Regional Mall

	Median Center Size	Construction Per Sqft (\$)	Developer Equip Per Sqft (\$)	Retailer Equip Per Sqft	Total Construction	Developer Equip. Total	Retailer Equip Total	Total Equipment
MSA	920,000	\$75.00	\$18.00	\$30.00	\$69,000,000	\$16,560,000	\$27,600,000	\$44,160,000
City	945,000	\$67.50	\$18.00	\$30.00	\$63,787,500	\$17,010,000	\$28,350,000	\$45,360,000
Suburb	<i>75</i> 1,000	\$67.50	\$18.00	\$30.00	\$50,692,500	\$13,518,000	\$22,530,000	\$36,048,000

Power Center

	Median Center Size	Construction Per Sqft (\$)	Developer Equip Per Sqft (\$)	Retailer Equip Per Sqft	Total Construction	Developer Equip. Total	Retailer Equip Total	Total Equipment
MSA	410,000	\$75.00	\$18.00	\$30.00	\$30,750,000	\$7,380,000	\$12,300,000	\$19,680,000
City	355,000	\$67.50	\$18.00	\$30.00	\$23,962,500	\$6,390,000	\$10,650,000	\$17,040,000
Suburb	410,000	\$67.50	\$18.00	\$30.00	\$27,675,000	\$7,380,000	\$12,300,000	\$19,680,000

Lifestyle Center

	Median Center Size	Construction Per Sqft (\$)	Developer Equip Per Sqft (\$)	Retailer Equip Per Sqft	Total Construction	Developer Equip. Total	Retailer Equip Total	Total Equipment
MSA	275,000	\$75.00	\$18.00	\$30.00	\$20,625,000	\$4,950,000	\$8,250,000	\$13,200,000
City	380,000	\$67.50	\$18.00	\$30.00	\$25,650,000	\$6,840,000	\$11,400,000	\$18,240,000
Suburb	420,000	\$67.50	\$18.00	\$30.00	\$28,350,000	\$7,560,000	\$12,600,000	\$20,160,000

Community Center

	Median Center Size	Construction Per Sqft (\$)	Developer Equip Per Sqft (\$)	Retailer Equip Per Sqft	Total Construction	Developer Equip. Total	Retailer Equip Total	Total Equipment
MSA	285,000	\$75.00	\$18.00	\$30.00	\$21,375,000	\$5,130,000	\$8,550,000	\$13,680,000
City	330,000	\$67.50	\$18.00	\$30.00	\$22,275,000	\$5,940,000	\$9,900,000	\$15,840,000
Suburb	300,000	\$67.50	\$18.00	\$30.00	\$20,250,000	\$5,400,000	\$9,000,000	\$14,400,000

Assumptions from Construction Experts

- Construction costs \$75 per Sqft (MSA)
- Developer Equipment Costs \$18 per Sqft
- Retailer Equipment Costs \$30 per Sqft
- Construction Costs in Small City or Suburb 10% Cheaper than MSA Therefore, City and Suburb Construction Costs \$67.50 per Sqft
- About 50% of equipment purchases are made locally; About 100% of construction labor is local.
- The Median Sizes were determined from taking samples of 30+ centers from each geographic division as described in operational data.

Table 2-2: Operations Employment

Admin, Waste Services Units

Regional Mall																										
MSA		YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11	YR 12	YR 13	YR 14	YR 15	YR 16	YR 17	YR 18	YR 19	YR 20	YR 21	YR 22	YR 23	YR 24	YR 25
Retail Trade	Units	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015
Mngmt of Co, Enter	Units	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Admin, Waste Services	Units	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58
City Area																										
Retail Trade	Units	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908
Mngmt of Co, Enter	Units	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Admin, Waste Services	Units	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Suburb Area																										
Retail Trade	Units	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873
Mngmt of Co, Enter	Units	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Admin, Waste Services	Units	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Power Center																										
Power Center MSA		YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11	YR 12	YR 13	YR 14	YR 15	YR 16	YR 1 <i>7</i>	YR 18	YR 19	YR 20	YR 21	YR 22	YR 23	YR 24	YR 25
	Units				YR 4 263		YR 6 263	YR 7 263		YR 9	YR 10° 263	YR 11 263	YR 12	YR 13 263	YR 14 ° 263	YR 15 263	YR 16 263	YR 17 263	YR 18° 263	YR 19° 263	YR 20 263	YR 21 263	YR 22 263	YR 23	YR 24 ` 263	YR 25 263
MSA	Units Units	263																								
MSA Retail Trade	• • • • • • • • • • • • • • • • • • • •	263 3	263	263	263	263		263	263	263	263	263	263	263	263	263	263	263	263	263	263	263	263	263	263	263
MSA Retail Trade Mngmt of Co, Enter	Units	263 3	263 3	263 3	263 3	263 3		263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3
MSA Retail Trade Mngmt of Co, Enter Admin, Waste Services	Units	263 3 5	263 3 5	263 3	263 3	263 3		263 3	263 3 5	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3	263 3
MSA Retail Trade Mngmt of Co, Enter Admin, Waste Services City Area	Units Units	263 3 5 230	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5	263 3 5
MSA Retail Trade Mngmt of Co, Enter Admin, Waste Services City Area Retail Trade	Units Units Units	263 3 5 230 3	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5	263 3 5 230	263 3 5	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5	263 3 5 230	263 3 5 230
MSA Retail Trade Mngmt of Co, Enter Admin, Waste Services City Area Retail Trade Mngmt of Co, Enter	Units Units Units Units	263 3 5 230 3	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230 3	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230 3	263 3 5 230	263 3 5 230 3	263 3 5 230 3	263 3 5 230 3	263 3 5 230 3	263 3 5 230 3	263 3 5 230 3	263 3 5 230	263 3 5 230 3	263 3 5 230 3	263 3 5 230	263 3 5 230	263 3 5 230 3	263 3 5	263 3 5 230	263 3 5 230 3
MSA Retail Trade Mngmt of Co, Enter Admin, Waste Services City Area Retail Trade Mngmt of Co, Enter Admin, Waste Services	Units Units Units Units	263 3 5 230 3 4	263 3 5 230	263 3 5 230	263 3 5 230	263 3 5 230 3	263 3 5 230	263 3 5 230	263 3 5 230 3 4	263 3 5 230 3	263 3 5 230	263 3 5 230 3	263 3 5 230 3	263 3 5 230 3	263 3 5 230 3	263 3 5 230 3	263 3 5 230 3	263 3 5 230	263 3 5 230 3	263 3 5 230 3	263 3 5 230	263 3 5 230	263 3 5 230 3	263 3 5	263 3 5 230	263 3 5 230 3

Lifestyle Center																										
MSA		YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	(R 11 Y	'R 12 \	(R 13)	(R 14)	/R 15 \	(R 16)	/R 17 \	(R 18 \	(R 191	(R 20 \	YR 21 Y	YR 22`	/R 23 \	/R 24	YR 25
Retail Trade	Units	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914
Mngmt of Co, Enter	Units	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Admin, Waste Services	Units	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
City Area																										
Retail Trade	Units	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684
Mngmt of Co, Enter	Units	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Admin, Waste Services	Units	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Suburb Area																										
Retail Trade	Units	<i>7</i> 11																								
Mngmt of Co, Enter	Units	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Admin, Waste Services	Units	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Community Center																										
MSA		YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10`	/R 11 Y	′R 12 \	/R 13 \	/R 14 \	/R 15 \	/R 16 \	/R 17 \	/R 18 \	/R 19 \	/R 20 \	YR 21 Y	YR 22`	/R 23 Y	′R 24`	YR 25
		YR 1 357	YR 2 3 <i>57</i>	YR 3 357	YR 4 357	YR 5 357	YR 6 357	YR 7 357	YR 8 3 <i>57</i>	YR 9 357	YR 10	(R 11) 3 <i>57</i>	′R 12 \ 3 <i>57</i>	(R 13) 3 <i>57</i>	(R 14) 3 <i>57</i>	(R 15) 3 <i>57</i>	(R 16) 3 <i>57</i>	(R 17) 3 <i>57</i>	(R 18) 3 <i>57</i>	(R 19) 3 <i>57</i>	(R 20) 3 <i>57</i>	YR 21 Y 3 <i>57</i>	(R 22 \ 357	(R 23) 3 <i>57</i>	(R 24 \ 357	YR 25 357
MSA				_		_	_		_		_			_		_	_		_		_			_		_
MSA Retail Trade	Units	357		357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357
MSA Retail Trade Mngmt of Co, Enter	Units Units	357 6	3 <i>57</i> 6	3 <i>57</i> 6	3 <i>57</i> 6	357 6	357 6	357 6	3 <i>57</i> 6	357 6	3 <i>5</i> 7	3 <i>5</i> 7	357 6	357 6	357 6	3 <i>57</i> 6	3 <i>57</i> 6	357 6	3 <i>57</i> 6	3 <i>57</i> 6						
MSA Retail Trade Mngmt of Co, Enter Admin, Waste Services	Units Units Units	357 6 8	3 <i>57</i> 6	357 6	3 <i>57</i> 6	357 6	3 <i>57</i> 6	357 6	3 <i>57</i> 6	3 <i>57</i> 6	3 <i>57</i> 6	357 6	357 6	357 6	3 <i>57</i> 6	357 6	3 <i>5</i> 7	3 <i>5</i> 7	357 6	357 6	357 6	3 <i>57</i> 6	3 <i>57</i> 6	357 6	3 <i>57</i> 6	3 <i>57</i> 6
MSA Retail Trade Mngmt of Co, Enter Admin, Waste Services City Area	Units Units Units	357 6 8																								
MSA Retail Trade Mngmt of Co, Enter Admin, Waste Services City Area Retail Trade	Units Units Units Units	357 6 8	357 6 8 413	357 6 8 413	357 6 8 413	357 6 8	357 6 8 413	357 6 8 413																		
MSA Retail Trade Mngmt of Co, Enter Admin, Waste Services City Area Retail Trade Mngmt of Co, Enter	Units Units Units Units Units	357 6 8 413 7																								
MSA Retail Trade Mngmt of Co, Enter Admin, Waste Services City Area Retail Trade Mngmt of Co, Enter Admin, Waste Services	Units Units Units Units Units	357 6 8 413 7																								
MSA Retail Trade Mngmt of Co, Enter Admin, Waste Services City Area Retail Trade Mngmt of Co, Enter Admin, Waste Services Suburb Area	Units Units Units Units Units Units Units	357 6 8 413 7 9																								

3. Results

As shown in Table 3-1 thru 3-4, the various shopping center types and levels of investments and employment will stimulate positive growth in all of the regional economies modeled. All sectors of the economy will experience strong growth during the time frame. These regions will experience strong growth in employment, largely in the retail trade, services, construction, and manufacturing sectors, resulting from the direct capital investments and employment increases by developers and operators. The direct employment stimulus leads to an increase in Real Disposable Income (the increase in Real Disposable Income directly affects the increase in local consumption).

Output

The Output of an economy is the amount of production in dollars, including all intermediate goods purchased as well as value-added (labor, capital, and fuel investments and profit). We can also think of output as sales for both final goods and intermediate goods. Output is dependent upon consumption in the area, state government spending, investment, and exports of the industries in the region.

Gross Regional Product

Gross Regional Product (GRP) as a value added concept is analogous to the national concept of Gross Domestic Product. It is equal to Output, excluding intermediate inputs. The value-add concept is equal to compensation and profits.

Employment

The Employment variable in REMI Policy Insight uses historical data from the Bureau of Economic Analysis (BEA) and is based upon place of work, including part-time and full-time employees. The employment figures projected below are the difference from baseline and should not be cumulated.

Population

Population is a key variable in REMI Policy Insight that affects the potential labor force, government spending, consumption spending, and housing prices. Changes in population are due to migration changes into and out of the region. All changes in population are cumulative. Each year is difference from baseline, but includes the previous year.

Real Disposable Personal Income

Real Disposable Personal Income (RDPI) is the inflation-adjusted income that is available for consumers to spend. It is personal income minus taxes and social contributions plus dividends, rents, and transfer payments. The numbers of employees in the area, their wage rate, and the consumer prices all affect RDPI. An increase in employment or wage, or a decrease in consumers' prices increases a region's RDPI. Consequently, the opposite decreases RDPI. The increase in RDPI is an indirect effect from the new jobs in the regions. The summation of new wages, minus taxes, earned by workers equals the increase in RDPI.

Table 3-1: MSA Area

Emi	ola	vm	ent

Scenario Type	With Market Displacement					Without Market Displacement				
				2026-				2026-		
Years	2006	2008	2010	2030*	2006	2008	2010	2030*		
Regional Mall	0.099%	0.097%	0.094%	0.087%	0.32%	0.311%	0.301%	0.273%		
Power Center	0.013%	0.013%	0.012%	0.011%	0.042%	0.04%	0.039%	0.035%		
Lifestyle Center	0.045%	0.044%	0.042%	0.039%	0.143%	0.139%	0.134%	0.121%		
Community Center	0.018%	0.018%	0.017%	0.016%	0.057%	0.055%	0.054%	0.049%		

^{*}Average Employment

Output (Millions of Fixed \$96)

Scenario Type	With Market Displacement				Without Market Displacement				
		2026-							
Years	2006	2008	2010	2030*	2006	2008	2010	2030	
Regional Mall	0.07%	0.068%	0.065%	0.344%	0.224%	0.213%	0.203%	1.059%	
Power Center	0.01%	0.009%	0.009%	0.045%	0.029%	0.028%	0.027%	0.14%	
Lifestyle Center	0.032%	0.031%	0.029%	0.157%	0.1%	0.095%	0.091%	0.474%	
Community Center	0.014%	0.013%	0.013%	0.066%	0.041%	0.039%	0.037%	0.194%	

GRP (Millions of Fixed \$96)

Scenario Type	With	Without Market Displacement						
					2026-			
Years	2006	2008	2010	2030	2006	2008	2010	2030
Regional Mall	0.065%	0.064%	0.062%	0.330%	0.204%	0.2%	0.193%	1.01%
Power Center	0.009%	0.009%	0.008%	0.045%	0.027%	0.026%	0.025%	0.133%
Lifestyle Center	0.029%	0.029%	0.028%	0.15%	0.091%	0.089%	0.086%	0.451%
Community Center	0.013%	0.012%	0.012%	0.065%	0.038%	0.037%	0.036%	0.187%

Population (Last Year of Phase)

Scenario Type	With Market Displacement				Without Market Displacement			
				2026-				2026-
Years	2006	2008	2010	2030	2006	2008	2010	2030
Regional Mall	0.008%	0.019%	0.027%	0.043%	0.026%	0.063%	0.088%	0.139%
Power Center	0.001%	0.003%	0.003%	0.005%	0.003%	0.008%	0.011%	0.017%
Lifestyle Center	0.004%	0.009%	0.012%	0.019%	0.012%	0.028%	0.039%	0.061%
Community Center	0.001%	0.003%	0.005%	0.007%	0.005%	0.011%	0.015%	0.024%

Real Disposable Personal Income (Millions of Fixed \$96) Scenario Type With Market Displacement

Scenario Type	With	n Market D	isplaceme	ent	Without Market Displacement				
				2026-				2026-	
Years	2006	2008	2010	2030	2006	2008	2010	2030	
Regional Mall	0.024%	0.026%	0.027%	0.160%	0.076%	0.082%	0.086%	0.52%	
Power Center	0.003%	0.003%	0.004%	0.02%	0.01%	0.011%	0.011%	0.065%	
Lifestyle Center	0.011%	0.011%	0.012%	0.07%	0.033%	0.036%	0.038%	0.228%	
Community Center	0.005%	0.005%	0.005%	0.03%	0.014%	0.015%	0.015%	0.076%	

Table 3-2: City Area

Scenario Type	With	ent	Without Market Displacement					
				2026-				2026-
Years	2006	2008	2010	2030*	2006	2008	2010	2030*
Regional Mall	0.029%	0.031%	0.031%	0.03%	0.315%	0.332%	0.335%	0.333%
Power Center	0.004%	0.004%	0.004%	0.004%	0.038%	0.04%	0.04%	0.04%
Lifestyle Center	0.01%	0.01%	0.011%	0.01%	0.112%	0.118%	0.119%	0.118%
Community Center	0.007%	0.007%	0.007%	0.007%	0.069%	0.073%	0.073%	0.072%

^{*}Average Employment

Output (Millions of Fixed \$96)

Scenario Type	With	ent	Without Market Displacement					
				2026-				2026-
Years	2006	2008	2010	2030	2006	2008	2010	2030
Regional Mall	0.022%	0.023%	0.023%	0.1%	0.226%	0.238%	0.239%	1.238%
Power Center	0.003%	0.003%	0.003%	0.015%	0.027%	0.029%	0.029%	0.15%
Lifestyle Center	0.007%	0.008%	0.008%	0.04%	0.08%	0.084%	0.085%	0.44%
Community Center	0.006%	0.006%	0.006%	0.03%	0.05%	0.053%	0.053%	0.272%

GRP (Millions of Fixed \$96)

Scenario Type	With	Without Market Displacement						
				2026-				2026-
Years	2006	2008	2010	2030	2006	2008	2010	2030
Regional Mall	0.021%	0.023%	0.023%	0.12%	0.216%	0.233%	0.236%	1.238%
Power Center	0.003%	0.003%	0.003%	0.015%	0.026%	0.028%	0.029%	0.15%
Lifestyle Center	0.007%	0.007%	0.008%	0.04%	0.077%	0.082%	0.083%	0.439%
Community Center	0.005%	0.006%	0.006%	0.03%	0.048%	0.051%	0.052%	0.272%

Population (Last Year of Phase)

Scenario Type	With Market Displacement				Without Market Displacement				
				2026-				2026-	
Years	2006	2008	2010	2030	2006	2008	2010	2030	
Regional Mall	0.003%	0.008%	0.012%	0.019%	0.038%	0.097%	0.138%	0.228%	
Power Center	0.001%	0.001%	0.001%	0.002%	0.005%	0.012%	0.017%	0.027%	
Lifestyle Center	0.001%	0.003%	0.004%	0.007%	0.014%	0.035%	0.049%	0.082%	
Community Center	0.001%	0.002%	0.003%	0.004%	0.008%	0.021%	0.03%	0.049%	

Real Disposable Personal Income (Millions of Fixed \$96)

Scenario Type	With	ent	Without Market Displacement					
				2026-				2026-
Years	2006	2008	2010	2030	2006	2008	2010	2030
Regional Mall	0.013%	0.015%	0.016%	0.085%	0.134%	0.157%	0.17%	0.978%
Power Center	0.002%	0.002%	0.002%	0.01%	0.016%	0.019%	0.02%	0.118%
Lifestyle Center	0.004%	0.005%	0.005%	0.03%	0.048%	0.056%	0.06%	0.348%
Community Center	0.003%	0.004%	0.004%	0.02%	0.029%	0.034%	0.037%	0.211%

Table 3-3: Suburb Area

Em	la	ov	m	e	nt
CIII	ρı	υy	ш	e.	ш

Scenario Type	· · · · · · · · · · · · · · · · · · ·				Without Market Displacement					
				2026-				2026-		
Years	2006	2008	2010	2030*	2006	2008	2010	2030*		
Regional Mall	0.018%	0.018%	0.018%	0.018%	0.129%	0.127%	0.124%	0.125%		
Power Center	0.005%	0.005%	0.005%	0.004%	0.039%	0.038%	0.037%	0.037%		
Lifestyle Center	0.014%	0.014%	0.014%	0.015%	0.104%	0.102%	0.1%	0.1%		
Community Center	0.008%	0.008%	0.008%	0.008%	0.056%	0.055%	0.054%	0.054%		

^{*}Average Employment

Output (Millions of Fixed \$96)

Scenario Type	Witl	n Market D	isplaceme	ent	Witho	ut Market Displacement			
				2026-				2026-	
Years	2006	2008	2010	2030	2006	2008	2010	2030	
Regional Mall	0.012%	0.012%	0.011%	0.06%	0.079%	0.077%	0.073%	0.384%	
Power Center	0.004%	0.004%	0.004%	0.02%	0.024%	0.023%	0.022%	0.117%	
Lifestyle Center	0.009%	0.009%	0.009%	0.047%	0.063%	0.061%	0.059%	0.308%	
Community Center	0.006%	0.006%	0.006%	0.03%	0.035%	0.034%	0.033%	0.171%	

GRP (Millions of Fixed \$96)

Scenario Type	With Market Displacement				Without Market Displacement				
				2026-				2026-	
Years	2006	2008	2010	2030	2006	2008	2010	2030	
Regional Mall	0.013%	0.012%	0.012%	0.065%	0.081%	0.079%	0.075%	0.391%	
Power Center	0.004%	0.004%	0.004%	0.02%	0.025%	0.024%	0.023%	0.12%	
Lifestyle Center	0.01%	0.01%	0.009%	0.05%	0.065%	0.063%	0.06%	0.313%	
Community Center	0.006%	0.006%	0.006%	0.03%	0.036%	0.035%	0.033%	0.175%	

Population (Last Year of Phase)

Scenario Type	With	n Market D	isplaceme	ent	Witho	ut Market	Displacen	nent
				2026-				2026-
Years	2006	2008	2010	2030	2006	2008	2010	2030
Regional Mall	0.002%	0.005%	0.007%	0.011%	0.015%	0.036%	0.05%	0.075%
Power Center	0.001%	0.002%	0.002%	0.003%	0.005%	0.011%	0.015%	0.022%
Lifestyle Center	0.002%	0.004%	0.006%	0.009%	0.012%	0.029%	0.04%	0.06%
Community Center	0.001%	0.002%	0.003%	0.005%	0.007%	0.016%	0.022%	0.032%

Real Disposable Personal Income (Millions of Fixed \$96)

2026-
2030
0.201%
0.075%
0.201%
0.11%

Table 3-4 Investment Results, Year 1

Regional Mall Construction and Equipment

	MSA Area	City Area	Suburb Area
Employment	0.122%	0.127%	0.06%
Output (Mil Fixed 96\$)	0.136%	0.127%	0.062%
GRP (Mil Fixed 96\$)	0.099%	0.102%	0.052%
Population (Last Year of Phase)	0.009%	0.014%	0.007%
Real Disp Pers Inc (Mil Fixed 96\$)	0.054%	0.077%	0.034%
Power Center Construction and Equipment			
	MSA Area	City Area	Suburb Area
Employment	0.054%	0.048%	0.033%
Output (Mil Fixed 96\$)	0.061%	0.048%	0.034%
GRP (Mil Fixed 96\$)	0.044%	0.038%	0.028%
Population (Last Year of Phase)	0.004%	0.005%	0.004%
Real Disp Pers Inc (Mil Fixed 96\$)	0.024%	0.029%	0.019%
Lifestyle Center Construction and Equipment			
	MSA Area	City Area	Suburb Area
Employment	0.036%	0.051%	0.033%
Output (Mil Fixed 96\$)	0.041%	0.051%	0.035%
GRP (Mil Fixed 96\$)	0.03%	0.041%	0.029%
Population (Last Year of Phase)	0.003%	0.006%	0.004%
Real Disp Pers Inc (Mil Fixed 96\$)	0.016%	0.031%	0.019%
Community Center Construction and Equipment			
	MSA Area	City Area	Suburb Area
Employment	0.038%	0.044%	0.024%
Output (Mil Fixed 96\$)	0.042%	0.044%	0.025%
GRP (Mil Fixed 96\$)	0.031%	0.036%	0.021%
Population (Last Year of Phase)	0.003%	0.005%	0.003%
Real Disp Pers Inc (Mil Fixed 96\$)	0.017%	0.027%	0.014%

About REMI

Regional Economic Models, Inc. (REMI) is the nation's leading provider of economic forecasting and policy analysis software. The REMI Policy Insight model is used by over half of state governments, and numerous consulting firms, cities, and universities. Established in 1980, REMI has published model developments in the *American Economic Review*, the *Review of Economics and Statistics*, and other highly regarded publications.

Contact: Frederick Treyz, Ph.D., CEO, REMI

(413) 549-1169 fred@remi.com

Adam J. Cooper, Associate Economist, REMI

(413) 549-1169 adam@remi.com

Appendix



ICSC Shopping Center Definitions

Basic Configurations and Types for the United States

The term "shopping center" has been evolving since the early 1950s. Industry nomenclature originally offered four basic terms: neighborhood, community, regional, and superregional centers. However, as the industry has matured, these four classifications are no longer adequate. To remove some of the ambiguity and accommodate new shopping center formats, The International Council of Shopping Centers has defined eight principal shopping center types, shown in the accompanying table.

The definitions, and in particular the table, are meant to be guidelines for understanding major differences between the basic types of shopping centers. Several categories shown in the table, such as size, number of anchors, and trade area, should be interpreted as "typical" for each center type. They are not meant to encompass the operating characteristics of every center. As a general rule, the main determinants in classifying a center are its merchandise orientation (types of goods/services sold) and its size.

It is not always possible to precisely classify every center. Some centers are hybrids, combining elements from two or more basic classifications. Alternatively, a center's concept may be sufficiently unusual as to preclude it from fitting into one of the eight generalized definitions presented here, and may ultimately lead to a new category as the industry continues to evolve.

Some types of centers are not separately defined here but nonetheless are a part of the industry. These can be considered subsegments of one of the larger, defined groups, perhaps created to satisfy a particular niche market. One example would be the **convenience center**, among the smallest of centers, whose tenants provide a narrow mix of goods and personal services to a very limited trade area. A typical anchor would be a convenience store like 7-Eleven or other mini-mart. At the other end of the size spectrum are **super off-price malls** that consist of a large variety of value-oriented retailers, including factory outlet stores, department store close-out outlets, and category killers in an enclosed megamall (up to 2 million square feet) complex.

Another type of shopping format that is receiving significant attention and warrants special discussion is the broad class of **mixed-use developments**. In the strict sense, mixed-use is not necessarily a type of shopping center. However, where retail comprises one of at least three significant revenue-producing uses, this type of development is common to the shopping center industry. Successful mixed-use projects that are developed as a single unit sometimes referred to as **mixed-use centers**—may consist of well-integrated entertainment, office, hotel, residential, recreation, sports stadiums, cultural venues, and/or other uses that mutually support a substantial retail component. Often, such properties feature residential units or office suites above streetlevel retail stores, although they can also be malls integrated with office buildings and hotels. Sometimes, lifestyle centers may form the retail component of mixed-use projects.

Other small subsegments of the industry include vertical, downtown, off-price, home improvement, and car care centers. The trend toward differentiation and segmentation will continue to add new terminology as the industry matures.



SHOPPING CENTER: A group of retail and other commercial establishments that is planned, developed, owned and managed as a single property, with on-site parking provided. The center's size and orientation are generally determined by the market characteristics of the trade area served by the center. The three main physical configurations of shopping centers are malls, open-air centers, and hybrid centers.

BASIC DESIGN CONFIGURATIONS

Mall: The most common design mode for regional and superregional centers is often referred to as a "shopping mall." The walkway or "mall" is typically enclosed, climate-controlled and lighted, flanked on one or both sides by storefronts and entrances. Onsite parking, usually provided around the perimeter of the center, may be surface or structured.

Open-Air Center: An attached row of stores or service outlets managed as a unit, with on-site parking usually located in front of the stores with common areas that are not enclosed, is often referred to as an "open-air center." Open canopies may connect the storefronts, but an open-air center does not have enclosed walkways linking the stores. The most common variations of this configuration are linear, L-shaped, U-shaped, Z-shaped, or cluster. The linear form is often used in neighborhood and community centers. The cluster form and its variations have lent themselves to the emergence of new classes of centers such as the lifestyle center, in which the physical layout and open feel are differentiating features. Historically, the open-air configuration has been referred to as a "strip center," though the strip center got its name from the linear form, where stores sit side-by-side in a long and narrow row of stores.

Hybrid Center: A center that combines elements from two or more of the main shopping center types. Common hybrids include value-oriented mega-malls (combining mall, power center, and outlet elements), power-lifestyle centers (combining power center and lifestyle center elements), and entertainment-retail centers (combining retail uses with megaplex movie theaters, theme restaurants, and other entertainment uses).

SHOPPING CENTER TYPES

MALLS

Regional Center: This center type provides general merchandise (a large percentage of which is apparel) and services in full depth and variety. Its main attraction is the combination of anchors, which may be traditional, mass merchant, discount, or fashion department stores, with numerous fashion-oriented specialty stores. A typical regional center is usually enclosed with an inward orientation of the stores connected by a common walkway. Parking surrounds the outside perimeter.

Superregional Center: Similar to a regional center, but because of its larger size, a superregional center has more anchors, a deeper selection of merchandise, and draws from a larger population base. As with regional centers, the typical configuration is an enclosed mall, frequently with multilevels. Parking may also be structured to accommodate the sheer size of the center.

OPEN-AIR CENTERS

Neighborhood Center: This center is designed to provide convenience shopping for the day-to-day needs of consumers in the immediate neighborhood. According to ICSC's SCORE publication, roughly half of these centers are anchored by a supermarket, while about a third have a drugstore anchor. These



anchors are supported by stores offering drugs, sundries, snacks and personal services. A neighborhood center is usually configured as a straight-line strip with no enclosed walkway or mall area and parking in the front. Centers may have a canopy or other façade treatment to provide shade and protection from inclement weather, or to tie the center together.

Community Center: A community center typically offers a wider range of apparel and other soft goods than the neighborhood center. Among the more common anchors are supermarkets, super drugstores, and discount department stores. Community center tenants sometimes contain value-oriented big-box category-dominant retailers selling such items as apparel, home improvement/ furnishings, toys, electronics or sporting goods. The center is usually configured in a straight line as a strip, or may be laid out in an L or U shape, depending on the site and design. Of the eight center types, community centers encompass the widest range of formats. For example, certain centers that are anchored by a large discount department store often have a discount focus. Others with a high percentage of square footage allocated to off-price retailers can be termed offprice centers.

Power Center: A center dominated by several large anchors, including discount department stores, off-price stores, warehouse clubs, or "category killers," i.e., stores that offer a vast selection in related merchandise categories at very competitive retail prices. The center typically consists of several anchors, some of which may be freestanding (unconnected) and only a minimum amount of small specialty tenants.

Theme/Festival Center: These centers typically employ a unifying theme that is carried out by the individual shops in their architectural design and, to an extent, in their merchandise. Entertainment is often a common element of such centers, although it may come in the shopping experience as much as in the tenants themselves. These centers are often targeted to tourists, but may also attract local customers who might be drawn by the center's unique nature. Theme/festival centers may be anchored by restaurants and entertainment facilities. Generally located in urban areas, they are often adapted from older, sometimes historic, buildings, and can be part of mixed-use projects.

Outlet Center: This center type consists of manufacturers' and retailers' outlet stores selling brand-name goods at a discount. These centers are typically not anchored, although certain brand-name stores may serve as "magnet" tenants. The majority of outlet centers are open-air, configured either in a strip or as a village cluster, although some are enclosed.

Lifestyle Center: Most often located near affluent residential neighborhoods, this center type caters to the retail needs and "lifestyle" pursuits of consumers in its trading area. It has an open-air configuration and typically includes at least 50,000 square feet of retail space occupied by upscale national chain specialty stores. Other elements differentiate the lifestyle center in its role as a multi-purpose leisure-time destination, including restaurants, entertainment, and design ambience and amenities such as fountains and street furniture that are conducive to casual browsing. These centers may be anchored by one or more conventional or fashion specialty department stores.



ICSC SHOPPING CENTER DEFINITIONS-U.S.

TYPE OF SHOPPING CENTER	CONCEPT	SQUARE FEET	ACREAGE	TYPICA	TYPICAL ANCHOR(S)		PRIMARY	
		(INCLUDING ANCHORS)		NUMBER	TYPE	RATIO*	TRADE AREA**	
		MAI	LLS					
Regional Center	General merchandise; fashion (mall, typically enclosed)	400,000-800,000	40-100	2 or more	Full-line department store; jr. department store; mass merchant; discount department store; fashion apparel	50-70%	5-15 miles	
Superregional Center	Similar to regional center but has more variety and assortment	800,000+	60-120	3 or more	Full-line department store; jr. department store; mass merchant; fashion apparel	50-70%	5-25 miles	
		OPEN-AIR	CENTERS					
Neighborhood Center	Convenience	30,000-150,000	3-15	1 or more	Supermarket	30-50%	3 miles	
Community Center	General merchandise; convenience	100,000-350,000	10-40	2 or more	Discount department store; supermarket; drug; home improve- ment; large specialty/ discount apparel	40-60%	3-6 miles	
Lifestyle Center	Upscale national chain specialty stores; dining and entertainment in outdoor setting.	Typically 150,000-500,000, but can be smaller or larger.	10-40	0-2	Not usually anchored in the traditional sense but may include book store; other large-format specialty retailers; multi-plex cinema; small department store.	0-50%	8-12 miles	
Power Center	Category-dominant anchors; few small tenants	250,000-600,000	25-80	3 or more	Category killer; home improvement; discount department store; warehouse club; off-price	75-90%	5-10 miles	
Theme/Festival Center	Leisure; tourist-orient- ed; retail and service	80,000-250,000	5-20	N/A	Restaurants; entertainment	N/A	N/A	
Outlet Center	Manufacturers' outlet stores	50,000-400,000	10-50	N/A	Manufacturers' outlet stores	N/A	25-75 miles	

^{*}The share of a center's total square footage that is attributable to its anchors; **The area from which 60-80% of the center's sales originate.

For questions about these definitions, please contact Michael Tubridy of ICSC's Albert Sussman Library: (646) 728-3671, or at mtubridy@icsc.org.

Special thanks to the following for their input into these definitions: Norris Eber, Joseph Freed & Associates; Michael E. McCarty and Michael P. McCarty, Simon Property Group; Brad Hutensky, The Hutensky Group; Greg Andrews, Green Street Advisors; Tom Bernier, General Growth Properties; Jim DeLisle, Runstad Professor of Real Estate, University of Washington; Steve Parker, Westfield Corp.; Dave Daleiden, Weingarten Realty Investors; and Rudy Milian, ICSC.

