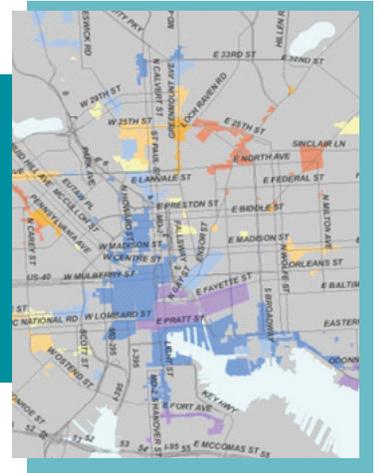


COMMERCIAL MARKET VALUE ANALYSIS

City of Baltimore
May 2009



Capital at the point of impact.



BALTIMORE CITY COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY (CEDS)

COMMITTEE VISION:

Coordination economic development agencies in Baltimore through active communication and collaboration toward a common goal, achieving improved economic situation and quality of life for Baltimore city residents.

COMMITTEE MISSION:

By developing strategic interventions to promote innovation, economic diversification, regional competitiveness, and entrepreneurship, the CEDS process will create a platform for new job growth and income generation for distressed areas of the Baltimore region.



Capital at the point of impact.



INTRODUCTION

The City of Baltimore has a diversity of commercial areas: a vibrant downtown home with large corporate headquarters; long corridors radiating in and out of the city; and small clusters of neighborhood-based services and retail stores. Over the years, targeted initiatives and programs have been established to measure and support the long term vitality of each of these commercial area types, such as the Downtown Partnership of Baltimore, Baltimore Mainstreets and Baltimore Retail Business Districts. More comprehensive studies have aimed at providing a citywide overview of such things as the nature of market demand in underserved urban areas (2007 Baltimore DrillDown) and an analysis of existing vs. projected commercial and retail land usage (City's 2006 comprehensive master plan). However, no existing study provides a comprehensive overview of the nature of market quality in all the commercial areas in the City or provides a comparative analysis with respect to quality, diversity and stability.

Therefore in 2008 the City of Baltimore, in an effort to develop a citywide Comprehensive Economic Development Strategy (CEDS), sought TRF services to create a method for indexing all of Baltimore's commercial corridors to provide the public and private sectors an analytic tool to understand the nature and strengths of each. TRF previously worked successfully with the City to complete a residential Market Value Analysis (MVA)¹ an index of the Baltimore residential markets. And TRF approached this project with the same commitment to use data and market indicators to analyze, validate and understand the nature and conditions of the existing corridors.

The resulting Commercial Market Value Analysis (CMVA) is described in this report. The CMVA enables the assessment of individual commercial corridors relative to the other commercial corridors in the City. The CMVA uses data to both locate and characterize various aspects of Baltimore's commercial areas including, but not limited to: (1) the stability (or instability) in the number of establishments within the area; (2) the mix of commercial activity types; (3) the presence, growth and/or stability of businesses; and (4) social and economic character of the areas surrounding commercial corridors. The information in the CMVA allows the City of Baltimore to better craft strategies and target areas for efforts such as commercial revitalization, investment attraction, intergovernmental capacity-building programs and the application of land use regulations.

To ensure the resulting CMVA product would be accepted by local economic development officials and the private sector, the City of Baltimore Department of Planning convened a committee comprised of representatives from various City entities, area business leaders and representatives of the development community to understand the factors currently used to evaluate commercial markets (especially those with expertise in commercial real estate). The committee reviewed the resulting typology and methodology prior to public release and identified areas where the results were inconsistent with the perception and reality of the area. TRF used this feedback to refine the analysis and improve the resulting metric. What follows is a summary of the general method of the CMVA, an explanation of how units of analysis were defined and utilized in the process as well as information on the various datasets.

1 For more information on the 2008 Baltimore City Housing MVA, visit <http://www.baltimorecity.gov/government/planning/HousingMarketTyp.php>.

GEOGRAPHIC UNITS OF ANALYSIS

An essential first step in the CMVA process was a systematic assessment of the City's commercial footprint. Using land use and zoning GIS (geographic information system) layers, TRF took an inventory of all City designated commercial classifications and uses. The CEDS Committee decided that the following classifications should be *included* in the study: commercial (land use), mixed use (land use), and shopping center (land use), office/industrial parks (zoning) and office-residential (zoning). Excluded were industrial (land use) and business center (land use). The map below shows the commercial footprint used for the study. [See Figure 1]

TRF took this commercial footprint and divided it into smaller units so that each unit would roughly represent a distinct geographic commercial market. One street or commercial corridor may represent several distinct shopping areas. The footprint GIS layer was split into units of analysis using major roads and point level commercial establishment data to guide the identification of geographic cut points. There was a total of 293 units of analysis. These are shown as different colors in the maps. [See Figure 2 for a sample along Belair Road showing the delineation of individual units of analysis.]

Figure 1 Commercial Areas

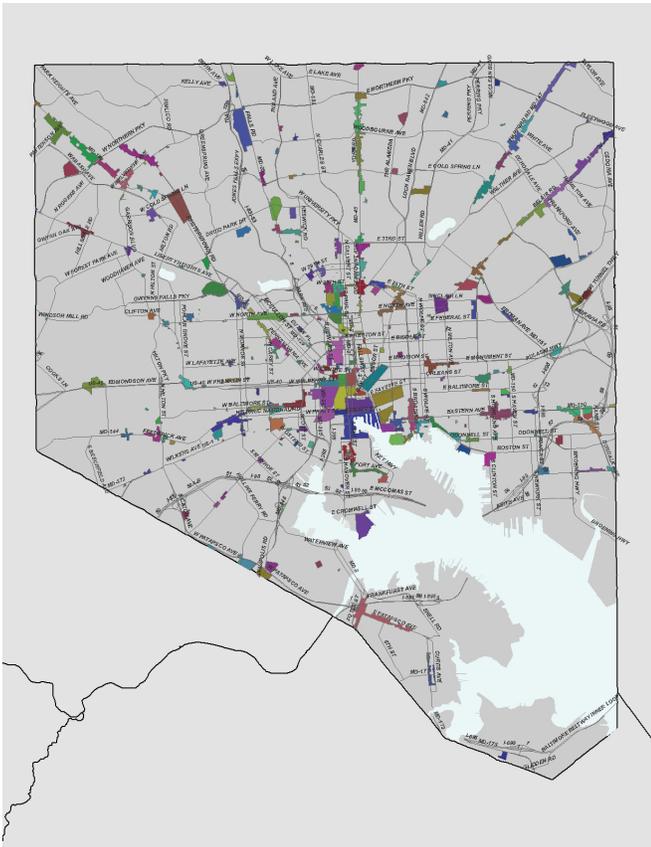


Figure 2 Defining Individual Units of Analysis



DATASETS

TRF worked with the CEDS Committee to review and select data sources that would offer a reliable and valid description of all covered areas. After exploring numerous databases and indicators, TRF recommended the following to the CEDS Committee and Department of Planning.

Commercial Properties

Source: InfoUSA

InfoUSA, a service of infoGROUP Inc., maintains proprietary databases of information relating to businesses and consumers in the United States and internationally. It provides access to its databases through InfoUSA.com.

Year(s): 2004-2007

Variables: TRF took four datasets each representing an individual year snapshot of Baltimore's commercial establishment population. Records in each of these four datasets were merged together based on unique business identifiers in order to create a longitudinal database showing which years during the entire period the business was present. The business level variables are: commercial type (service w/sales, service no sales, retail); business opened between 2003 and 2007; business closed between 2003 and 2007.

Geocoding/Aggregation: TRF geocoded the historical dataset. Points (i.e., businesses) falling within a unit of analysis, or within 100 feet of a unit of analysis, were selected and aggregate counts were based on the number of points inside or within 100 feet of each unit of analysis.

Analysis variables: Total number of commercial properties; % retail; % commercial; % of all businesses that closed from 2003 to 2007; and business birth-to-death ratio (number new/number closed).

TRF Market Value Analysis

Source: The Reinvestment Fund

The Market Value Analysis (MVA) identifies housing market types throughout a city by evaluating multiple factors (e.g., residential sales prices, foreclosures, home ownership) assessed at the Census block group

level. Block groups are objectively compared on a variety of factors and are statistically assigned a group classification based on their profile of market vitality.

Year(s): 2008

Geocoding/Aggregation: MVA market categories are descriptive of Census block groups.

Analysis variable: 2008 block group MVA classification.

Issues and Complaints Related to City Services

Source: City of Baltimore 311 System

Baltimore City's 311 call center is a system for taking residents' and visitors' calls about non-emergency issues and complaints related to City services. Baltimore's 311 system, which takes about 3,000 calls a day, uses customer relations management software to track calls and send work orders throughout the City government. Data from this system were extracted, mapped and analyzed to identify geographical patterns of reports of issues/complaints.

Year(s): 2006-2007

Variables: TRF eliminated cases where the problem was listed in the database as "not able to confirm." TRF combined cases into two groups based on the 311 call "description" variable. These groups were: (a) Quality of Life (e.g., dirty streets, abandoned car, graffiti, sanitation, etc.); and (b) Structural Issues (potholes, street repairs, etc.).

Geocoding/Aggregation: The City's 311 database was provided to TRF in geocoded form. Points (i.e., the location of reported problems) falling within a unit of analysis, or within 100 feet of a unit of analysis, were selected and aggregate counts were based on the number of points inside or within 100 feet of each unit of analysis.

Analysis variables: Quality of Life and Structural Issue counts for each unit were divided by the total number of commercial properties (source: InfoUSA). Final analysis variables are: Quality of Life calls per commercial property; and Structural Issues calls per commercial property.

Crime

Source: City of Baltimore Police Department

Year(s): 2006-2007

Variables: TRF included the following categories of crime in the analysis: aggravated assault; burglary; larceny; rape; robbery; and stolen auto.

Geocoding/Aggregation: Crime reports were provided to TRF in geocoded form. Points (i.e., specified crimes) falling within a unit of analysis, or within 100 feet of a unit of analysis, were selected and aggregate counts were based on the number of points inside or within 100 feet of each unit of analysis.

Analysis variable: Crime counts for each unit were divided by the total number of commercial properties (source: InfoUSA). Final analysis variable was crimes per commercial property. [See Figure 3]

Median Household Income

Source: Claritas

Claritas, Inc. is a consumer data and demographics firm that produces annual small-area estimates that update many of the data elements from the decennial Census. Claritas also produces projections, taking into account a variety of factors, to estimate the likely characteristics and counts of households and people five years into the future. Claritas projections are estimates made on the basis of certain broad assumptions about how populations change.

Year(s): 2007

Geocoding/Aggregation: Claritas estimates are pre-aggregated to the Census block group.

Analysis variable: Claritas projection of median household income for each block group. [See Figure 4]

Figure 3 Crimes per Commercial Unit

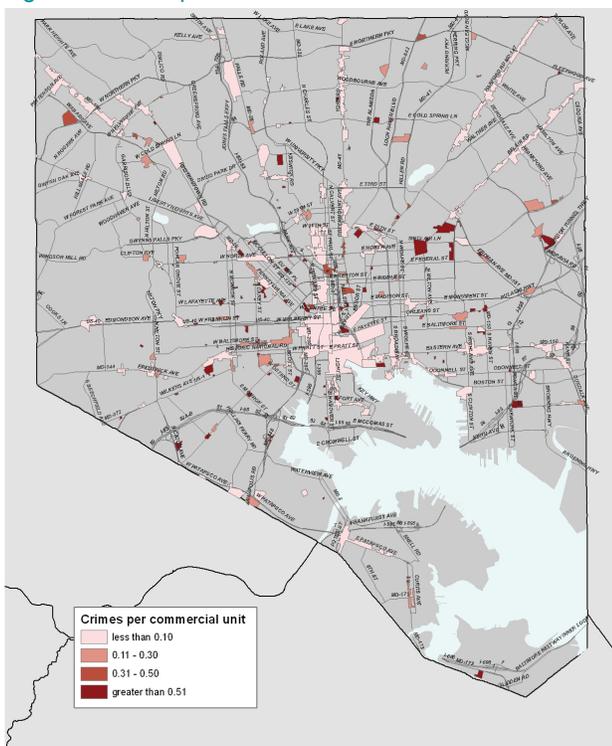
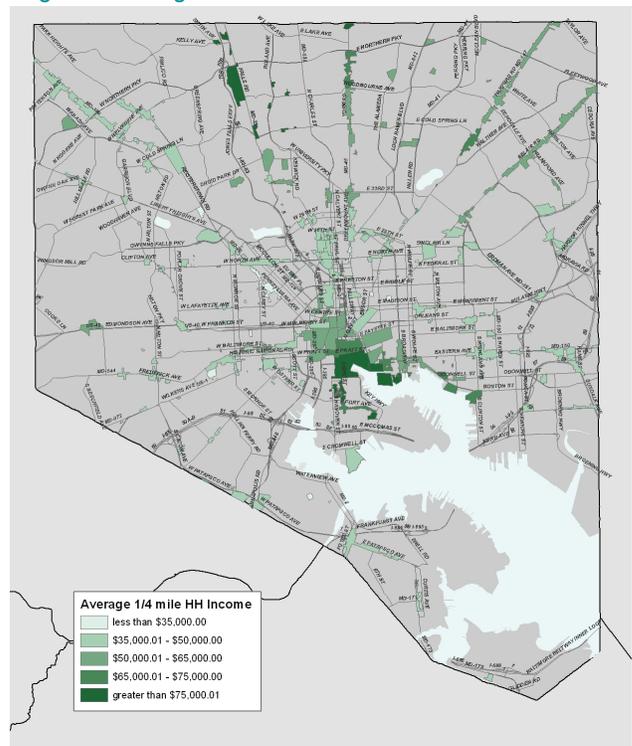


Figure 4 Average Household Income



Aggregate Household Income

Source: Social Compact / Baltimore
Neighborhood Indicators Alliance - Jacob
France Institute
University of Baltimore

Utilizing credit bureau income estimates, Social Compact calculates the income distribution, or the number of households per income bracket, for each Census block group. The aggregate income is calculated as the sum of the total number of households in each income bracket multiplied by the average household income for that income bracket. The aggregate income estimate is then adjusted to include the proportion of neighborhood income attributed to informal economic activity.

Year(s): 2007

Geocoding/Aggregation: Aggregate income estimates were provided to TRF for each Census block group.

Analysis variable: Aggregate block group household income.

METHOD / RESULTS

Using the above-referenced datasets and indicators, five analyses were performed resulting in each unit of analysis receiving a score or classification in each of the following categories:

- Commercial Type
- Neighborhood Type
- Stress Index
- Closure Index
- Commercial Health

What follows is a description of the analysis as well as the mapped results for each type of analysis.

Commercial Type

Goal: Classify each commercial unit based on the distribution of the general commercial uses.

Variables: % retail, % service, total # of establishments.

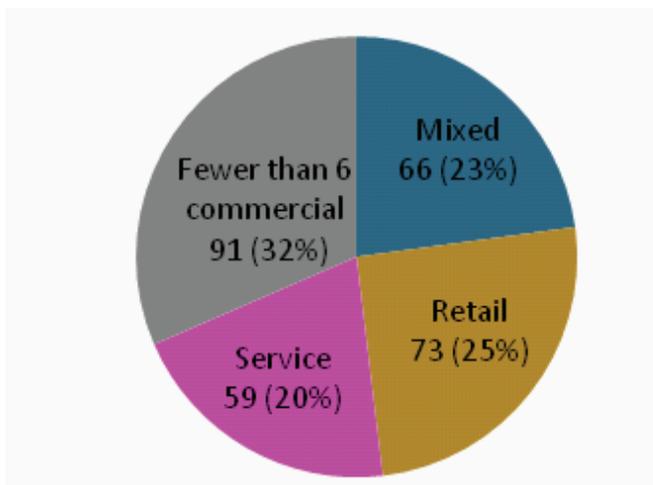
Method: Cluster analysis.²

Result Summary:

Type	Average % Retail	Average % Service	Number of Geographic Units
Mixed	53%	47%	66 (23%)
Retail	68%	32%	73 (25%)
Service	29%	71%	59 (20%)
Fewer than 6 commercial*	62%	38%	91 (32%)

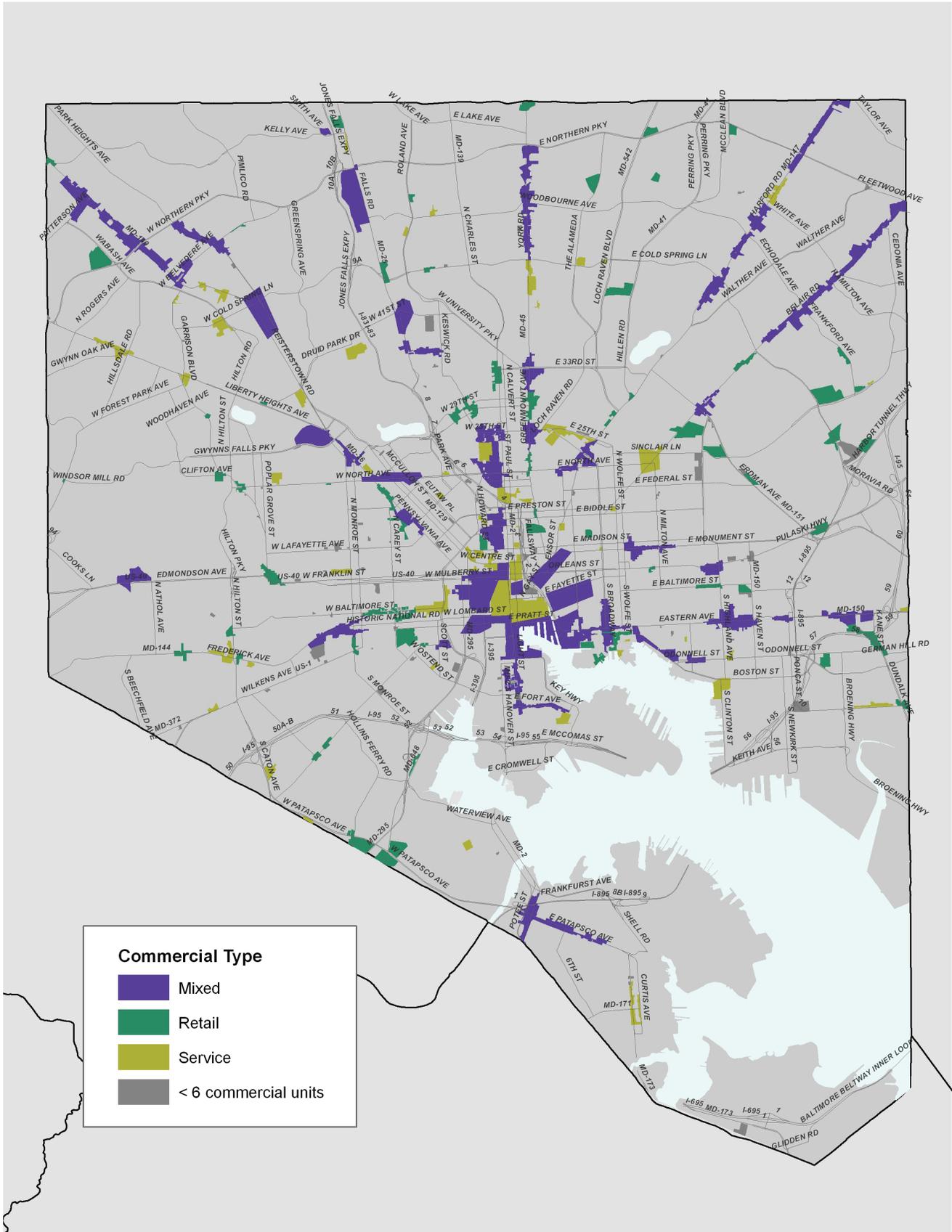
*Geographic units with fewer than 6 commercial establishments were not included in the cluster analysis. However, a summary of the commercial types within these small units reveals that retail is the most prominent type of commercial use.

Distribution of geographic units by type



² Cluster analysis is a statistical method used for classifying cases (people, geographic areas, events) into groups or clusters. The classification is based on a set of selected variables. Cases are grouped together so that the degree of variable association is strong between members of the same cluster and weak between members of different clusters.

Commercial Type



Neighborhood Type

Goal: Categorize the purchasing power of the population within ¼ mile from each commercial unit.

Variables: Aggregate neighborhood income; median household income (i.e., “pool”); and typical residential MVA classification.

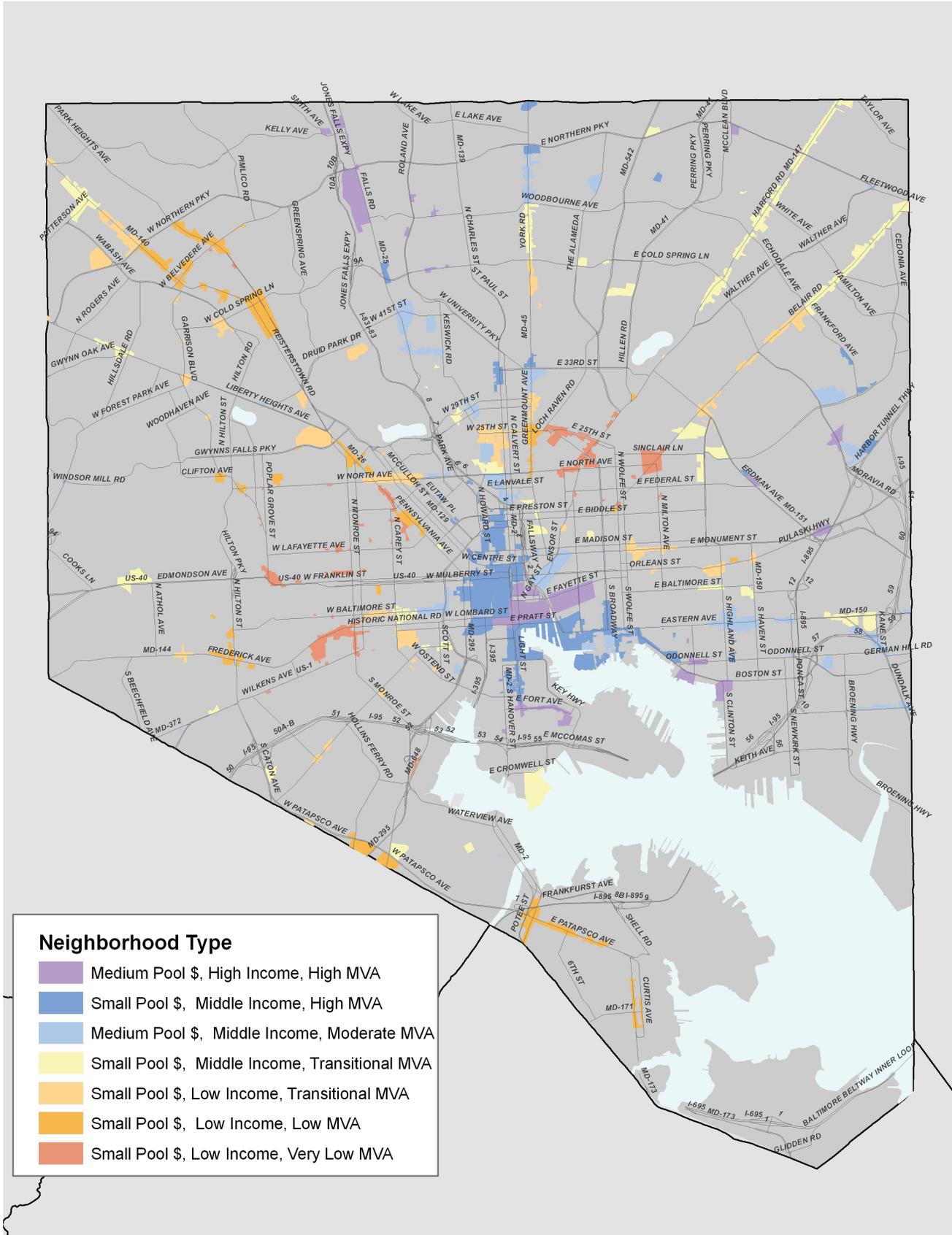
Method: Cluster analysis (analysis limited to only those units with 6 or more commercial units).

Result Summary (# units):

Commercial Neighborhood Type	1/4 mile Average Sales Price	Average Aggregate HH Income	Median HH Income	Typical MVA Type
Medium Pool \$, High Income, High MVA	\$327,035	\$271,160,596	\$76,457	Strong
Small Pool \$, Middle Income, High MVA	\$246,558	\$361,577,380	\$60,283	Strong
Medium Pool \$, Middle Income, Moderate MVA	\$157,370	\$220,792,696	\$49,855	Moderate
Small Pool \$, Middle Income Transitional MVA	\$130,984	\$176,071,670	\$47,996	Transitional
Small Pool \$, Low Income, Transitional MVA	\$104,419	\$168,371,990	\$43,995	Transitional
Small Pool \$, Low Income, Low MVA	\$72,549	\$143,235,031	\$40,715	Weak
Small Pool \$, Low Income, Very Low MVA	\$53,378	\$131,272,635	\$38,439	Very Weak
All	\$147,626	\$209,994,482	\$49,682	

Commercial Neighborhood Type	Average # Housing Units	Total # Areas	# Mixed	# Retail	# Service
Medium Pool \$, High Income, High MVA	3494	22	7	8	7
Small Pool \$, Middle Income, High MVA	5658	41	16	13	12
Medium Pool \$, Middle Income, Moderate MVA	4671	28	10	9	9
Small Pool \$, Middle Income Transitional MVA	4108	36	13	15	8
Small Pool \$, Low Income, Transitional MVA	4290	31	10	11	10
Small Pool \$, Low Income, Low MVA	4022	25	8	9	8
Small Pool \$, Low Income, Very Low MVA	4084	15	2	8	5
All	4405	198	66	73	59

Neighborhood Type



Stress Index

Goal: For each commercial unit provide a relative score on the level of “stress” related activity.

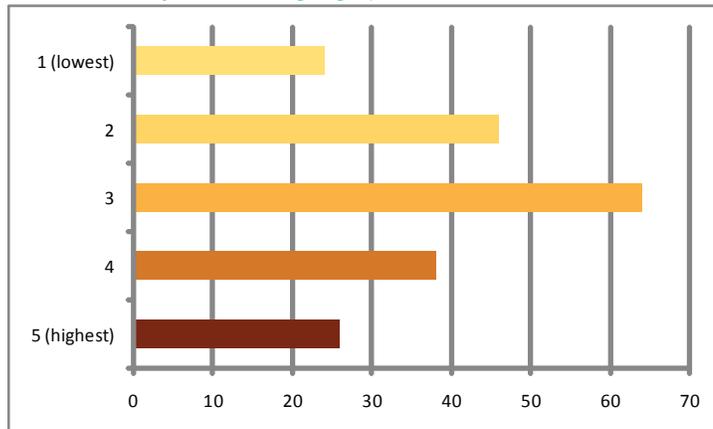
Variables: Quality of life 311 calls per commercial unit; structural 311 calls per commercial unit; and major crimes per commercial unit.

Method: Factor analysis³ (analysis limited to only those units with 6 or more commercial units).

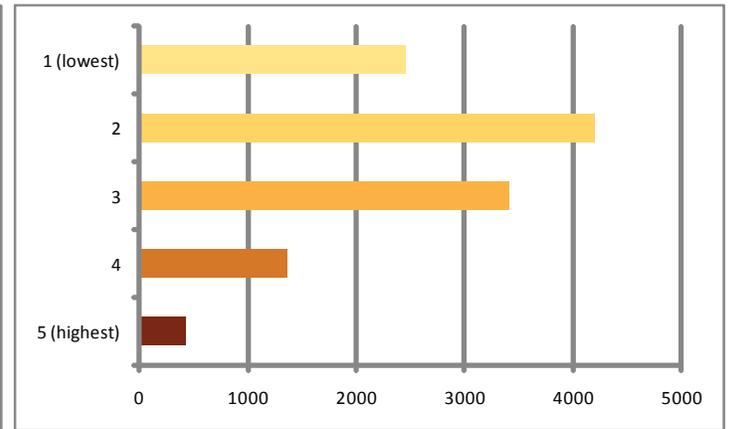
Result Summary (# units):

Stress level	Quality of Life 311 calls per commercial property	Structural 311 calls per commercial property	Major crimes per commercial property	# Mixed	# Retail	# Service
1 (lowest)	0.16	0.07	0.99	5	9	10
2	0.37	0.12	2.20	22	10	14
3	0.75	0.20	3.21	27	20	17
4	1.30	0.28	4.74	11	18	9
5 (highest)	2.79	0.55	6.37	1	16	9
Total	0.96	0.23	3.41	66	73	59

Stress Index by number of geographic units

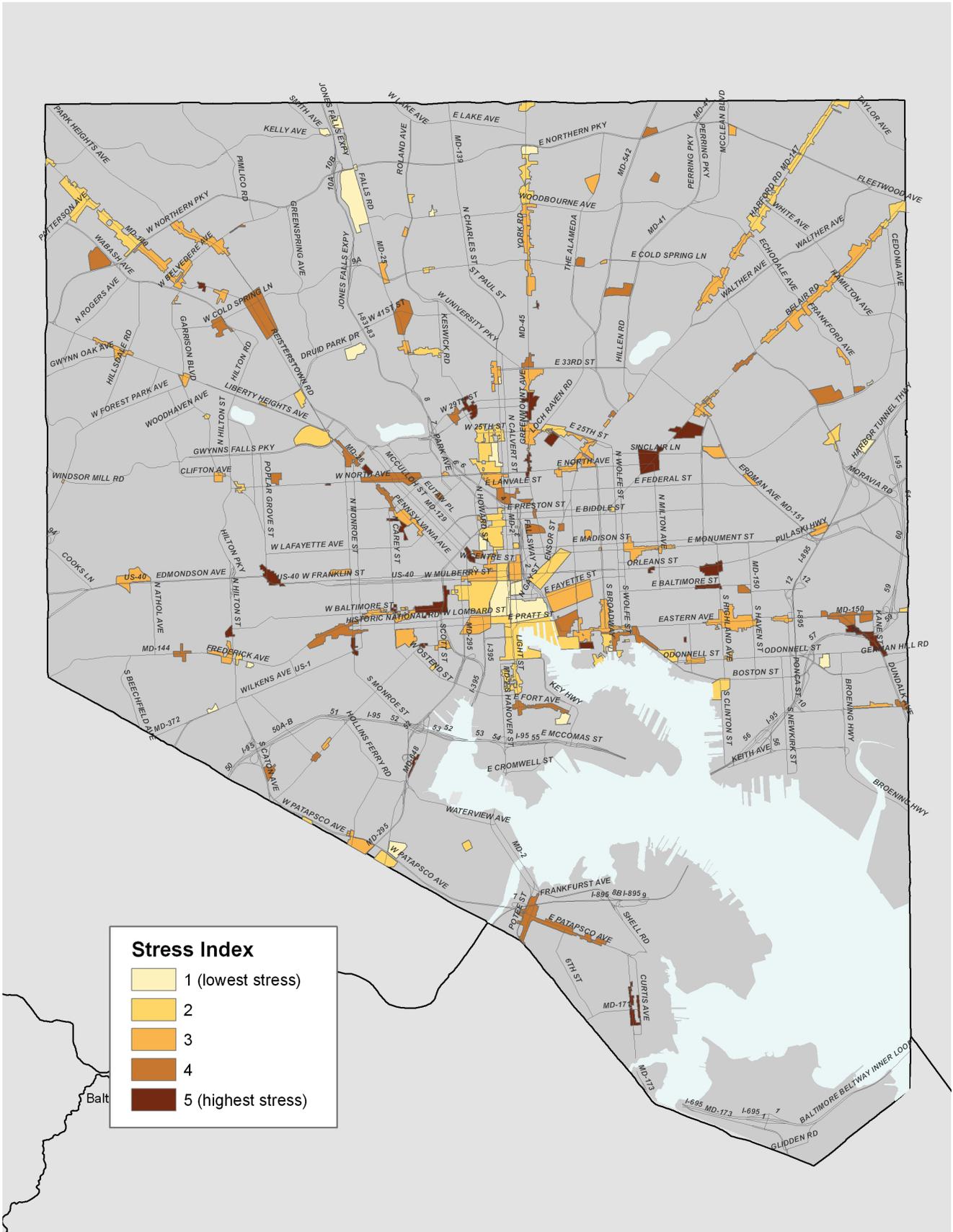


Stress Index by number of establishments



³ Factor analysis is a statistical method that allows for many variables to be combined into one composite variable. The analysis starts with an examination of correlations between variables. The correlations are then used to identify a new variable or “factor” which accounts for the interrelations observed in the data. The unique contribution or weight of each original variable to the factor is determined. For each record, the statistically derived weights combined with the original variables values are used to calculate a factor score.

Stress Index



Closure Index

Goal: Classify the commercial property closure pattern for each commercial unit of analysis.

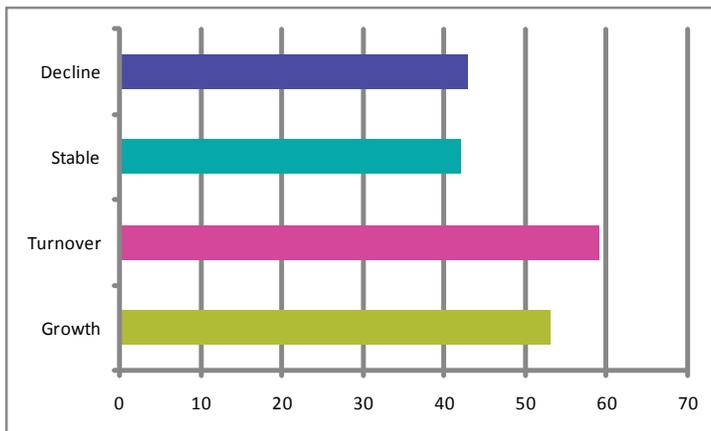
Variables: % of establishments that closed between 2003 and 2007; and commercial birth/death ratio 2003-2007.

Method: Categorical analysis (analysis limited to only those units with 6 or more commercial units).

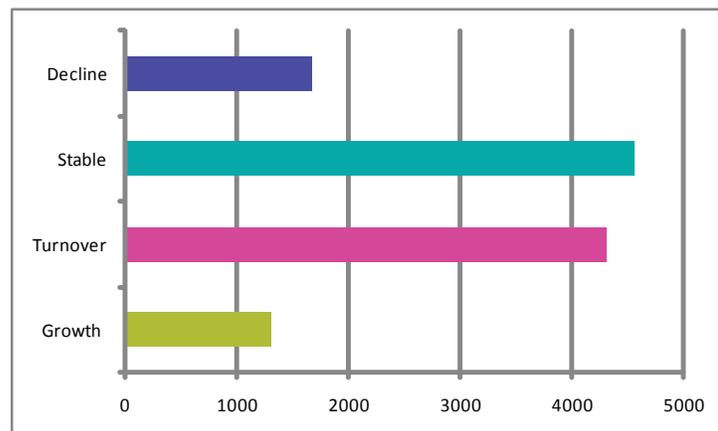
Result Summary (# units):

	Birth/death ratio	% Closed 2003-2007	# Mixed	# Retail	# Service
Growth	2.0	23%	7	25	21
Turnover	1.1	31%	26	22	11
Stable	.99	37%	23	9	10
Decline	.94	44%	10	16	17
Total	1.1	34%	66	72	59

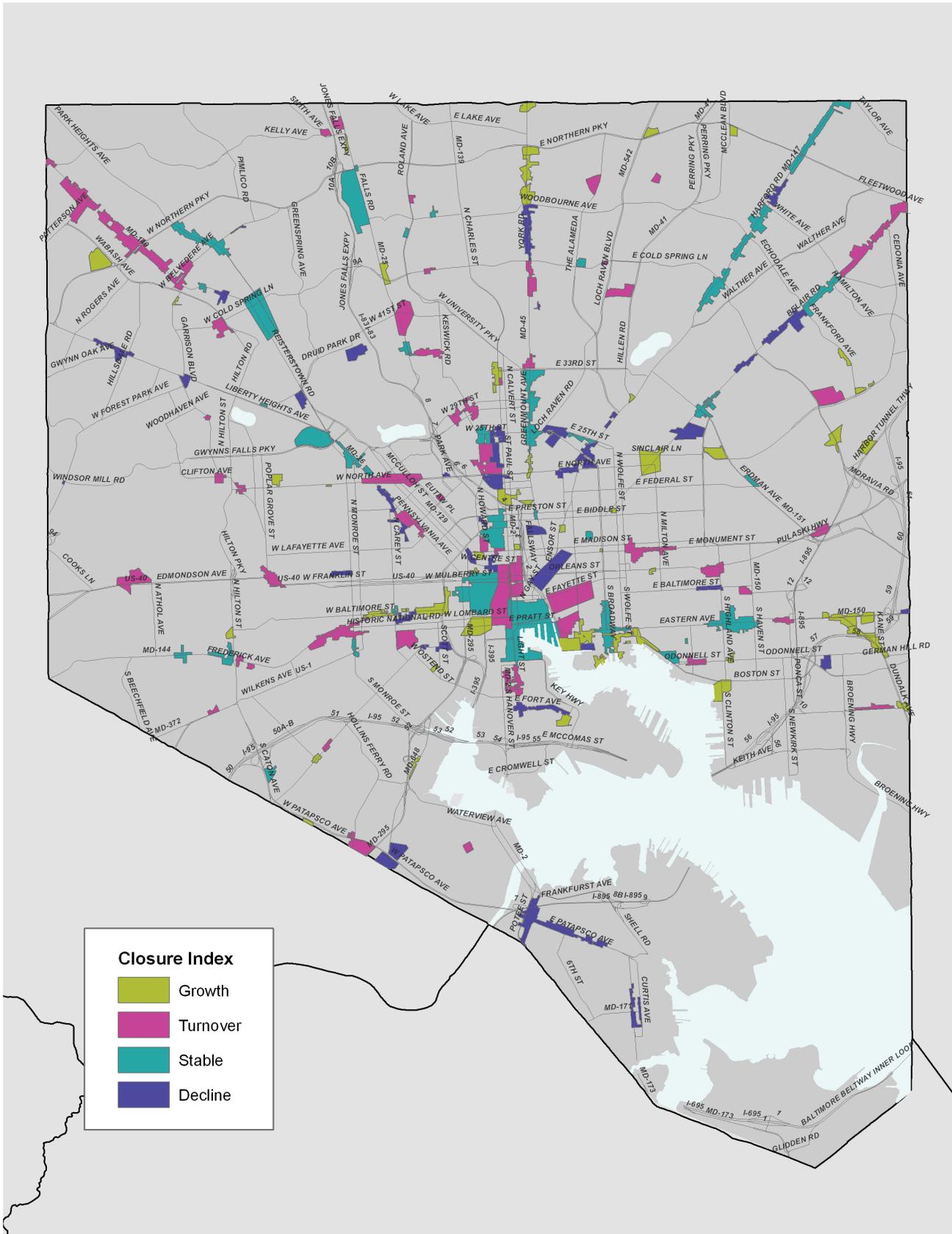
Closure Index by number of geographic units



Stress Index by number of establishments



Closure Index



Commercial Health

Goal: Combine the Stress and Closure indices to provide an overall summary of commercial area health.

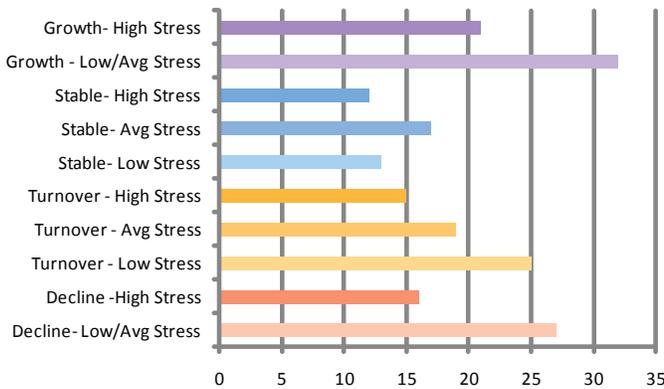
Variables: Quality of life 311 calls per commercial unit; structural 311 calls per commercial unit; major crime per commercial unit; % closed 2003-2007; and commercial birth/death ratio 2003-2007.

Method: Geographic units were classified into one-of-ten Commercial Health groups. The chart below defines these groups.

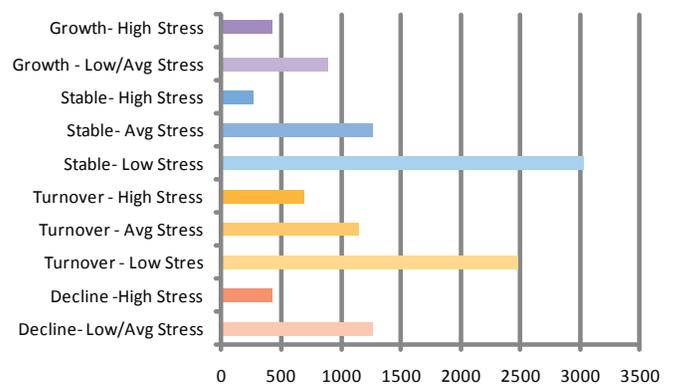
		CLOSURE INDEX			
		GROWTH	TURNOVER	STABLE	DECLINE
STRESS INDEX	1 (LOWEST)	Growth Low Stress	Turnover Low Stress	Stable Low Stress	Decline Low Stress
	2				
	3	Growth High Stress	Turnover Avg. Stress	Stable Avg. Stress	Decline High Stress
	4				
	5 (HIGHEST)				

Result Summary :

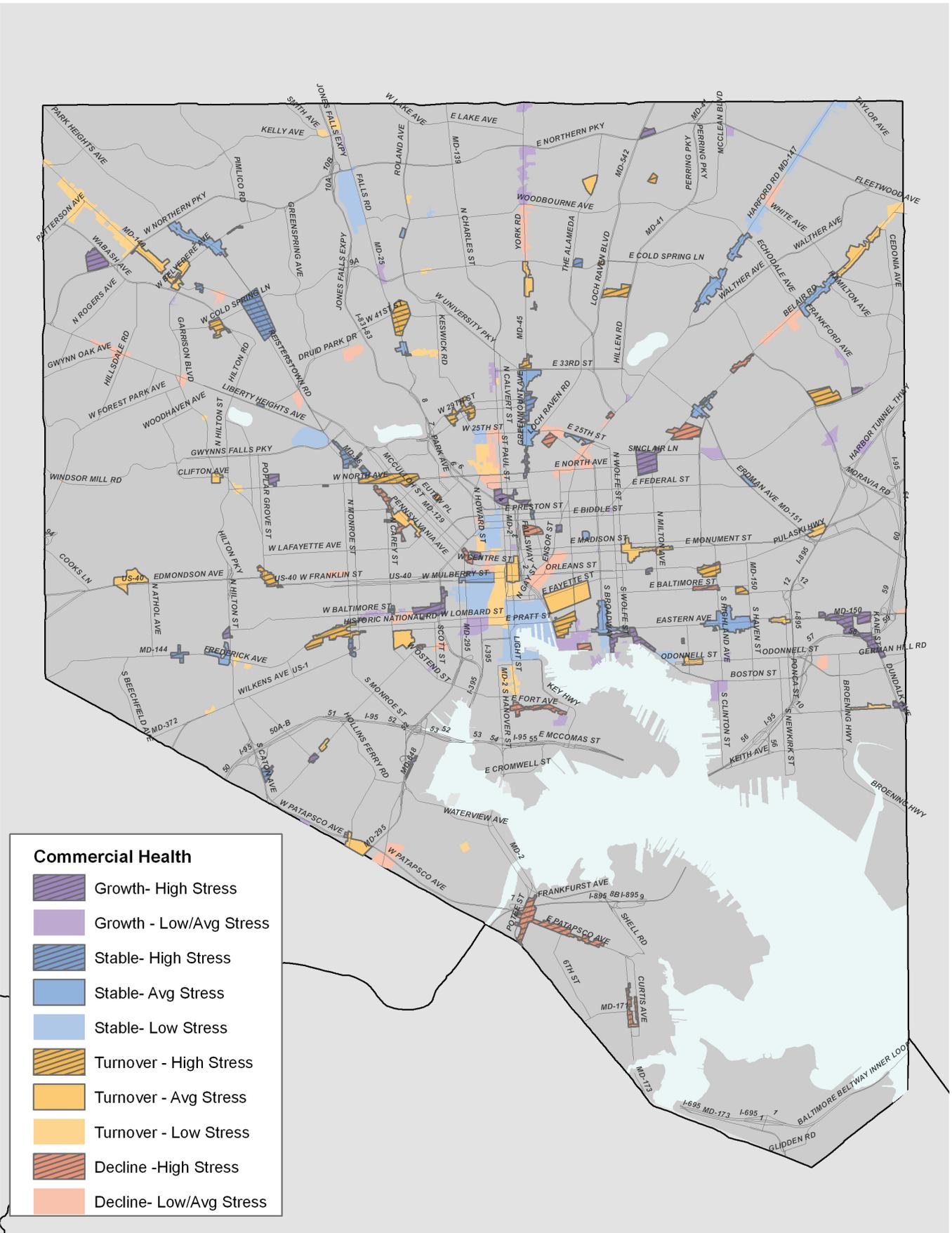
Stress Index by Number of Geographic Units



Stress Index by Number of Establishments



Commercial Health



At the beginning of this project, the City of Baltimore's Department of Planning set forth the objective of creating an analysis of its commercial corridors to provide general data-based support for the City's economic development strategic planning efforts and to inform its comprehensive rezoning project. This Commercial Market Value Analysis (CMVA) is a novel and comprehensive analysis of the market conditions of neighborhood commercial corridors (197 geographic areas, average acres = 16.4) within the City. Other studies generally will benchmark one city to another or provide detailed market studies of a particular parcel; the CMVA both differs from, and complements, these efforts because it is internally-referenced. By that we mean that the CMVA looks at all commercial corridors in the City and compares them against each other using a set of systematically gathered and comprehensive market data. The CMVA is also unique in that the process for producing the results involves not only a systematic analysis of the data but also many hours of on-site inspection of areas by representatives of TRF and the City. The purpose of the inspections was to ensure that the data representations comported with what we observed across the city.

This process was greatly enhanced by the participation and contributions of a committee of stakeholders representing government, the non-profit and for-profit sectors. This group assisted the City and TRF to refine the geographic and economic parameters of the study, as well as to secure and evaluate data, and provide critical review and comment on the findings. By engaging market participants in the assessment process, the City was able to ensure that the final product would have broad public support and planners and policymakers can feel confident using the tool to determine strategy going forward.

Using components of the InfoUSA database combined with locally collected data (e.g., 311 calls for service, reports of the incidence of crime), TRF was able to create a comprehensive database of each commercial corridor and the area surrounding those corridors. The following indices were created out of that database: diversity of commercial types; trend and density of store closure; surrounding neighborhood characteristics; quality of life; overall commercial health. The resulting CMVA captures and demonstrates the complexity of commercial markets and highlights the challenges as well as the opportunities that exist for public sector involvement. Each category provides diagnostic information that can be used independently - or with other factors - to determine the appropriate public action. All or part of the CMVA can also be updated over time in order to both measure the impact of any public action as well as to monitor changes in the market requiring a public response.

Among the many valuable lessons learned during this project was that the public sector does not have a good mechanism to collect and maintain data on commercial properties or corridors; this data deficit stands in contrast to Baltimore's strong data capacities with residential property. A lack of data descriptive of commercial property is not unique to Baltimore. This data deficit is endemic to municipalities and states nationally. Thus, for this analysis, the City needed to purchase a third-party database on business locations, sales and growth activity from InfoUSA. To the extent possible, Baltimore may wish to consider instituting data collection protocols related to commercial uses that are as rigorous as those in place for its residential property market.

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Jody Landers, Greater Baltimore Board of Realtors
Kirby Fowler, Downtown Partnership
Will Beckford, Baltimore Development Corporation
Donna Langley, Baltimore Development Corporation
Amy Bonitz, Turner Development Group
Tony Rodgers, A&R Development
Stanley Fine, Rosenberg, Martin, Greenberg, LLP
Susan Williams, STV Inc.
Stanley Zerden, Simone Real Estate
Sonny Morstein, Morstein Jewelers
Neil Tucker, Chesapeake Real Estate Group
Tom Stosur, Department of Planning
Arthur Gray, Department of Housing
Donald Fry, Greater Baltimore Committee
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