Empirical Identification of Product Life-Cycle Patterns in the Delivery of Municipal Park and Recreation Services

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ABSTRACT: Census data were used to delineate the product life-cycle curves of public recreation and park services in 30 major U.S. cities. The curves were defined by using an ARSPID time series analysis, which plotted regression lines for each city and estimated the time or curve that best fit the trend. Six different curves emerged that were termed low classical, increasing, decreasing, plateau, cycle-half recycle, and cycle-recycle. The management and marketing strategy implications of these profiles are discussed.

KEYWORDS: product life cycle, management, marketing strategy.

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The product life-cycle concept holds a central position in private sector marketing management and strategy. It has been applied to a wide spectrum of products, from consumer durables (Harrelle and Taylor 1981) to consumer nondurables (Polli and Cook 1969) and high technology industrial products (Tigert and Farivar 1981). It has also been applied in a variety of business contexts, including purchasing strategy (Rink 1976), product management (Kotler 1980), strategic planning (Smallwood 1973), and international trade (Onkvisit and Shaw 1983).

In recent years the public sector has demonstrated an increasing interest in adapting private sector marketing principles and practices, yet the literature pertaining to the use of the product life-cycle concept in the public sector is sparse. Its only reported applications in the public sector have been in municipal library services (Crompton and Bonk 1978) and municipal recreation and park services (Crompton 1979, Crompton and Lamb 1980, Howard and Crompton 1980).

These reported studies either assumed the existence of the classical bell-shaped product life cycle or focused upon validating it. No reported empirical
work considers product life-cycle curves other than the classical bell shape for public services.

Studies completed in the private sector consistently report that the classical bell shape is the most common pattern, but a number of other patterns that a product's market life may follow have been revealed. While the existence of these other cycles in the private sector has been confirmed by several investigators, they have yet to be identified in the public sector. Demonstration of the existence of cycles other than the classical cycle may lead to a revision in public sector marketing strategy.

The classical product life cycle (Figure 1, type 1) is represented by the equation \( Y = a + bx + cx^2 \) and graphically represented by the simple bell-shaped parabola. In their review of the product life-cycle literature, Rink and Swan (1979) cited twelve different investigations which provided empirical evidence supporting the classical model. However, empirical analyses have also revealed a variety of other product life-cycle shapes.

Four studies (Rink and Swan 1979, Swan and Rink 1982, Cox 1967, Kluiver 1977) have reported the existence of a total of fifteen different product life-cycle patterns (Figure 1). Six cycles in addition to the classical cycle were reported by Cox (1967). Rink and Swan (1979) confirmed five of these patterns as well as the classical cycle, and in addition identified five new cycles. Kluiver (1977) identified three further cycles not previously reported.

Other studies have confirmed the existence of some of these cycles. The increasing sales cycle (Figure 1, type 2), expressed by the equation \( Y = a + bx \) and shown graphically as a positive linear regression line, has been supported by six studies (Buzzell and Nourse 1967, Cox 1963, Cox 1967, Frederixon 1969, Rink and Swan 1979, Swan and Rink 1982). Five of these (all but Frederixon 1969) have identified a constantly decreasing sales cycle (Figure 1, type 3), expressed by the model \( Y = a - bx \).

The same six studies reported the cycle-recycle pattern (Figure 1, type 4), expressed \( Y = a + bx + cx^2 + dx^3 + ex^4 \). The plateau cycle (Figure 1, type 5) maintains its initial sales volume over time, showing no increase or decrease. It is expressed by the equation \( Y = a + bx \), where \( b \) is zero so \( Y = a \). Four studies (Cox 1963, Cox 1967, Rink and Swan 1979, Swan and Rink 1982) have provided supporting evidence. The same four studies also supported the existence of a cycle-half recycle pattern (Figure 1, type 6), expressed by the equation: \( Y = a + bx + cx^2 + dx^3 \).

The innovative maturity, growth maturity, and stable maturity cycles (Figure 1, types 7–9) were reported by three studies (Buzzell 1966, Rink and Swan 1979, Swan and Rink 1982). An additional study (Frederixon 1969) supported the stable maturity cycle (Figure 1, type 9). The rapid penetration cycle (Figure 1, type 10) has been supported by four studies (Frederixon 1969, Meenaghan and Turnbull 1981, Rink and Swan 1979, Swan and Rink 1982). Three studies (Headen 1966, Rink and Swan 1979, Swan and Rink 1982) have supported the growth-plateau cycle (Figure 1, type 11).

The remaining cycles have been identified in only one or two studies. Figure 1, type 12, a low-contour parabola expressed by the model
Figure 1
Types of Product Life Cycles

Type 1 Classical: a, b, c, d, e, g, h, k, l.

Type 2 Increasing: b, c, f, l, m.

Type 3 Decreasing: b, c, l, m.

Type 4 Cycle–Recycle: b, c, f, l, m.

Type 5 Plateau: c, l, m.

Type 6 Cycle–Half Recycle: c, l, m.
Type 7 Innovative Maturity: \( a, I, m \).

\[
Y = a + bx + cx^2 + dx^3
\]

Type 8 Growth Maturity: \( a, I, m \).

Type 9 Stable Maturity: \( a, f, I, m \).

Type 10 Rapid Penetration: \( f, j, I, m \).

Type 11 Growth-Decline-Plateau: \( g, I, m \).

Type 12 Low Classical: \( c \).
Type 13 Innovative Maturity: i.

Sales Volume

Time

Type 14 Growth Maturity: i.*

Sales Volume

Time

Type 15Decline Maturity: i.

Sales Volume

Time

* cited by Kluyver (1977) as being very similar to the traditional (classical) curve

b. Buzzell and Nourse (1967)   i. Kluyver (1977)—Maturity
c. Cox (1963, 1967)   stages only
e. Crompton and Bonk (1973)   k. Polli and Cook (1969)
f. Frederixon (1969)   l. Rink and Swan (1979)
g. Headen (1966)   m. Swan and Rink (1982)

Y = a + bx + cx^2, was identified by Cox (1963, 1967), and could be interpreted as a classical cycle. Kluyver (1977) identified three other cycles (Figure 1, types 13–15): innovative maturity, growth maturity (which he reported as being very similar to the classical cycle), and decline maturity.

Empirical investigation of these different cycles has been limited to private sector products. In the public sector there have been no reported efforts to identify patterns other than the classical cycle. This study presents the results of an empirical analysis of the product life cycles of public recreation and park services in the thirty largest U.S. cities. Concern was with identifying whether the various product life cycles found in the private sector emerged in the public sector, specifically in municipal recreation and park services. In addition, possible causes of different product life-cycle patterns are examined, and their marketing implications discussed.
**Figure 2**

The Structure of the Recreation and Parks Industry

![Diagram of the structure of the recreation and parks industry]

**Level of Product Aggregation**

A market may be defined at different levels of aggregation. In utilizing the product life cycle, it is important to specify and define the market level being examined. Figure 2 suggests that six meaningful levels can be distinguished in the leisure services industry: *product categories, product forms, firms, product lines, products* and *brands*. These are briefly defined in the following paragraphs:

*The Leisure Services Industry* is that group of service enterprises whose primary aim is to serve consumers’ leisure time needs.
Product Categories are macro-components that when aggregated, comprise the leisure services industry. The three components identified in Fig. 2 are essentially substitutes for the same underlying needs, and hence are competitors. They all provide opportunities for meeting leisure time needs.

Product Forms are those public and non-public provisions that when added together, form the recreation and parks product category. They have sufficiently distinctive characteristics to differentiate them from each other. Public refers to government-supplied recreation and parks provision, while non-public refers to the private and commercial sectors.

Firms are the individual agencies that provide public recreation and park services at all three levels of government.

Product Lines are clusters of like products, e.g., outdoor recreation, sports, and cultural activities.

Products are individual items within a product line, representing a specific version of the basic product idea, e.g., camping, interpretation, and equestrianism are all outdoor recreations.

Brands are distinctive units of products, identified through some unique characteristic—e.g., location, leadership, or timeframe—of a particular camping program.

The time duration of product life cycles increases at each higher level of the industry hierarchy. Life cycles of particular recreation programs (product level) may last for less than one year, while those of some existing individual city recreation and park agencies (firm level) currently exceed one hundred years in duration.

Delineating the level of aggregation is important, since at each level of the hierarchy the product life-cycle concept has a different degree of applicability and utility. Specification of the level under discussion clearly influences interpretation of the concept. The study reported here focused on the life cycles of services delivered by individual cities (firms).

Utility of the Concept to Municipal Park and Recreation Services

In theory, the product life-cycle concept should be applicable to municipal recreation and park services. These services are discretionary consumer purchases, characterized by high substitutability, and thus are subject to replacement by newer, superior products. Their evolutionary process is conceptually no different from that of products in a store. The pattern of leisure services offered by municipal agencies should change constantly in response to consumer demand and hence exhibit distinctive life cycles. Similarly, the agencies themselves are substitutable if superior alternatives emerge to replace them. This point was endorsed by Gardner (1965):

Like people and plants, organizations have a life cycle. They have a green and supple youth, a time of flourishing strength, and gnarled old age. We have all seen organizations that are still going through the diseases of childhood, and others so far gone in the rigidities of age that they ought to be pensioned off and sent to Florida to live out their days. . . . An organization may go from youth to old age in two or three decades or it may last for centuries.
Polli and Cook (1969) found that the product life-cycle concept is applied best to products whose sales are not substantially affected by variations or supply conditions; this reasonably characterizes municipal park and recreation services.

A longitudinal analysis of municipal recreation and park services enables their present status to be viewed from a long-term perspective. The principal utility of the product life-cycle concept lies in its use as an explanatory tool providing a context for an agency's existing status, and in its use for planning and policy formulation. Identifying product life-cycle patterns provides those supplying municipal recreation and park services with a framework making them better able to assess the present status of their agencies, and to develop marketing tactics and strategies that will enhance their future.

The life-cycle concept permits charting, within broad parameters, of the probable course that change will follow. Awareness of this course enhances a manager's ability to predict what changes will occur and, accordingly, to plan actions that will either modify that course or make optimal adaptation to it possible.

**Methodology**

The level of market acceptance of park and recreation services was measured by using market share. This measure was preferred to the use of raw data because it took into account population changes, changes in level of personal consumption, and the effect of inflation. The use of raw data that disregarded these concerns would not give meaningful results.

Given the need for longitudinal data, only two potential quantitative measures are available for empirical identification of life cycles in the public recreation and parks field: attendance, which is the equivalent of sales volume, and dollars. Three methods can be used to transpose these raw data: per capita changes in dollar or sales volume, total changes in dollar or sales volume using standardized units of measurement, and market share. It was not possible to translate the data into per capita volume because population data were available only every 10 years, and to interpolate the population between the 10 years in a straight line for all 30 cities would have led to considerable inaccuracies. Use of standardized dollars was considered, but again it was not possible to obtain index data going back continuously over the 72-year period without any change in the definition of how it was computed. The only available approach was to use market share.

The underlying premise, implied by the use of the financial market share measure, is that if municipal recreation and park services are perceived as meeting community needs and providing satisfaction, then increased political support from elected representatives will be manifested in a retained or increased share of budget allocations. If they are not meeting those needs, political support and their budget share would decrease. This assumes that priority status for city expenditure allocations accurately reflects citizen and political support and preferences for the various services provided.
The extent to which this premise is well-founded probably will vary between communities. For example, the census data cannot explain significant intervening variables that may cause or force a community to restructure its priorities. A significant environmental event may greatly influence the percentage of city budget spent on recreation and park services, regardless of community needs. Thus, the closing of major industries in a city may force a disproportionate cut in recreation and park services that will be reflected in the product life-cycle profile, even though these services are meeting community needs and providing satisfaction.

A further possible limitation in the use of market share for compiling life cycles is the possibility that the percentage of budget spent on recreation and park services could fluctuate (for example, downwards) over the years in relation to other city priorities, even though the actual dollar support remains constant or increases. In this situation it may appear that the life-cycle profile reflects a decrease in city commitment to parks and recreation, when in fact an increase in commitment has occurred—but one not as substantial as those accruing to other services.

Data were extracted from the U.S. Bureau of Census publication *City Government Finances* for the 30 largest American cities, which currently contain approximately 16 percent of the U.S. population. Market share refers to the share of a city's total annual budget allocated for recreation and park services expressed as a percentage ratio. The Bureau of the Census defines Recreation and Park Services as:

Cultural-scientific activities such as museums and art galleries; organized recreation, including playgrounds and playfields; swimming pools and bathing beaches; municipal parks; and special facilities for recreation, such as auditoriums, stadiums, auto camps, recreation piers and boat harbors.

The use of this broad definition of services was selected rather than each city's recreation and park department's annual budget for two reasons. First, it ensured that the same set of services was included in each city's analysis, whereas the city recreation and park departments are not all assigned responsibility for all of these services. Second, any shift of services from one city department to another would not influence the analysis, as it would if department budgets were used.

The horizontal scale was calibrated in annual increments. The annual market share of total city expenditures held by recreation and parks from 1909 to 1981 for each of the 30 cities was calculated. The data represented a complete longitudinal set with the exception of 1913, 1914, 1920 and 1921. (Data for these years were unavailable and had to be interpolated.)

The annual market shares were transposed into rolling three-year averages which smoothed out extraordinary yearly fluctuations but retained trend identification. An ARSPID time series analysis was undertaken with these data to obtain life-cycle models for the 30 cities over the 72-year span. Both best- and second-best-order equations were generated for each city. The program
plotted regression lines for each city, and estimated the line or curve that best fitted the trend. Thus, the program permitted classification of each city's life-cycle pattern.

Results

Analysis of the results based on the "best fit" model revealed that six different curves were required to describe the market share life cycles of the 30 cities in the sample (Figure 3).

Two cities, Boston and Memphis, demonstrated a "low classical" cycle (Figure 3, type 1) and are represented by the second degree polynomial model, \( Y = a + bx + cx^2 \).

When the market share of the budget increased by a constant amount each year, a straight line or simple positive linear regression line resulted (Figure 3, type 2). This growth function is represented by the equation \( Y = a + bx \) and was identified as the best fit for 11 cities.

An opposite effect, a negatively sloped linear regression line, representing a constantly decreasing market share of the budget, was found to be the best fit for six of the sample cities: New York; San Francisco; Cincinnati; Washington, DC; Newark; and St. Paul (Figure 3, type 3). The model \( Y = a - bx \) represented this declining slope.

When the market share for recreation and park services showed no change over the years, a "zero" slope or straight regression line parallel to the horizontal axis emerged (Figure 3, type 4). This pattern of no growth and no decline (plateau), represented by the model \( Y = a + bx \) (where \( b \) is zero so \( Y = a \)), was characteristic of the life cycle in four cities: Indianapolis, Denver, Atlanta, and Houston.

The fifth pattern identified was what Cox (1967) labeled "cycle-half recycle," and is represented by the model \( Y = a + bx + cx^2 + dx^3 \). This cycle, which demonstrates a growth in market share after a lengthy decline period, emerged as best fit in four cities: Detroit, Seattle, Oakland, and Dallas.

The last cycle was a fourth-degree polynomial and is represented by the model \( Y = a + bx + cx^2 + dx^3 + ex^4 \). This cycle-recycle pattern incorporates a second full cycle and was characteristic of the life cycle in three cities: Baltimore, Cleveland, and New Orleans.

Pattern types 2, 3, and 4 are linear functions with positive, negative, and zero slopes, respectively. The remaining patterns, types 1, 5, and 6, are polynomials of the second, third, and fourth degrees. Pattern types 5 and 6 are cyclical in nature, in contrast to types 1–4.

The emerging life-cycle patterns were similar to those reported by Cox (1967) in his study of ethical drug products. The relative frequencies of the six curves identified in both studies are shown in Table 1.

Cox (1967) concluded that type 6, the cycle-recycle pattern, was the basic curve form of the ethical drug industry because it emerged most frequently (39.1 percent) as the best fit. The basic pattern for municipal recreation and park services was type 2, an increasing growth curve which emerged in
Figure 3

Type 1 Low Classical Pattern
Market Share
Cities: Boston, Memphis
\[ Y = a + bx + cx^3 \]
Time

Type 2 Increasing Pattern
Market Share
Cities: Chicago, Philadelphia, St. Louis, Pittsburgh, Buffalo, Milwaukee, Minneapolis, Kansas City, Los Angeles, Portland, and Fort Worth.
\[ Y = a + bx \]
Time

Type 3 Decreasing Pattern
Market Share
Cities: New York; San Francisco; Cincinnati; Washington, DC; Newark; St. Paul
\[ Y = a - bx \] (where \( b \) is negative)
Time

Type 4 Plateau Pattern
Market Share
Cities: Indianapolis, Denver, Atlanta, Houston
\[ Y = a + bx \] (where \( b = 0 \)) or \( Y = a \)
Time

Type 5 Cycle—Half Recycle
Market Share
Cities: Detroit, Seattle, Oakland, Dallas
\[ Y = a + bx + cx^2 + dx^3 \]
Time

Type 6 Cycle—Recycle
Market Share
Cities: Baltimore, Cleveland, New Orleans
\[ Y = a + bx + cx^2 + dx^3 + ex^4 \]
Time
Table 1
Comparison of the Frequencies of Various Life-Cycle Patterns

<table>
<thead>
<tr>
<th>Pattern Type</th>
<th>Recreation and Parks Market Share</th>
<th>Cox [5] Ethical Drug Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Low Classical</td>
<td>6.6%</td>
<td>28.3%</td>
</tr>
<tr>
<td>2 Increasing</td>
<td>36.6%</td>
<td>5.4%</td>
</tr>
<tr>
<td>3 Decreasing</td>
<td>20.0%</td>
<td>12.8%</td>
</tr>
<tr>
<td>4 Plateau</td>
<td>13.3%</td>
<td>5.1%</td>
</tr>
<tr>
<td>5 Cycle-Half Recycle</td>
<td>13.3%</td>
<td>9.3%</td>
</tr>
<tr>
<td>6 Cycle-Recycle</td>
<td>10.0%</td>
<td>39.1%</td>
</tr>
</tbody>
</table>

36.6 percent of the cities investigated and greatly exceeded the second-ranked decreasing curve, which accounted for 20 percent of the identified patterns. This finding is further supported when the percentage of the sample cities that are in either the increasing cycle (type 2) or the growth stage of any other cycle, is compared to the percentage that are in a decreasing cycle (type 3) or decline stage of other cycles. Almost half of the sampled cities (49.9 percent) show growth, while only 36.6 percent (type 1–6.6 percent, type 3–20 percent, and type 6–10 percent) show a decline pattern. This finding is likely to surprise many municipal recreation and park administrators: their conventional wisdom, constantly reiterated in the leisure literature, is that over the past decade cutbacks in municipal funding have caused their services to lose market share and exhibit a declining pattern (Howard and Crompton 1980).

Cox’s (1967) contention that the cycle-recycle pattern (type 6) is the basic form for ethical drugs was supported by follow-up studies that monitored trends. These showed that type 1, 2, 3, and 5 curves all had a tendency to become type 6 cycle-recycle curves over longer time periods. Whether this same tendency occurs in municipal recreation and park services may be determined only by periodically repeating the procedures described here. Further research may show that the cycle-recycle form in time becomes the dominant pattern for municipal recreation and park services, and that the currently dominant positive growth curves are only the initial growth stages of a longer cycle-recycle pattern.

Strategic Implications

Recognition of the product life cycle concept provides a long-term framework for interpreting the present status of municipal recreation and park services, and for understanding the forces acting upon them. It is important to know where the present is in the continuum of time and events. The recognition of a variety of product life cycle patterns permits current events to be interpreted in a clearer perspective and gives “more perspective than
looking at the present alone” (Levitt 1965), for the present is distorted by
day-to-day events.

The approach used here enables managers to derive empirically the life-
cycle pattern of their agencies, instead of assuming that the classical bell-
shape cycle prevails. Identification of the appropriate life cycle permits adop-
tion of more accurate planning and marketing strategies. In turn, this provides
for a more precise long-term framework that should enable recreation and
park services to retain the initiative through proactive preplanning rather than
reacting to crises.

It cannot be assumed that the product life cycle is always an independent
variable. That is, the pattern of market acceptance it reveals determines the
marketing strategy that may subsequently be adopted. It must be recognized
that the program life cycle is often a dependent variable. That is, the mar-
keting-mix variables of product, price, promotion and distribution may serve
as independent variables that lead, control, and determine the product life-
cycle pattern. In this context, the type of cycle or the stage within a particular
cycle reflects both the marketing strategy adopted and the effect of uncon-
trollable variables in the agency’s operating environment. Thus time, which
is graphed as the independent variable (Figures 1 and 3), becomes a proxy
for such components as product quality, advertising, competition in the en-
vironment, clientele and political support, and adaptability.

The debate as to whether the product life cycle is a dependent or an
independent variable has been discussed extensively in the marketing literature
(Dhalla and Yuspeh 1976). However, it is probably more important to recog-
nize the association of the product life-cycle model and marketing-mix
variables than it is to establish the nature of a causal relationship between
them. Product life-cycle stages require some adjustments in marketing strat-
egy, which in turn control those life-cycle stages themselves (Onkvisit and
Shaw 1983).

There is substantial literature suggesting how and why strategy should
be changed at various stages of the classical product life-cycle pattern, but
little guidance has been offered on appropriate strategies for other life-cycle
patterns. Scheving (1974) states:

As a mere description of empirical occurrences, the product life cycle concept is of little
use to marketing management. In order to be meaningful and effective in today’s heavy
competition, it has to be used in a strategic way.

There are at least two “strategic ways” in which the product life-cycle patterns
identified in this study can be used by public recreation and park agencies: in
management and in marketing strategy.

Management Implications

The life-cycle pattern of recreation and park services can have a deter-
mining effect upon management strategy and the managerial skills required
to maximize effectiveness. For example, some managers are more successful
at managing a growing agency experiencing an increasing market share, while others are more effective at maintaining a department that is at a plateau, and still others at managing an agency whose market share is declining. The manager who is good at setting and achieving short-range goals appropriate for a declining agency may be much less effective in shaping long-range plans and laying the groundwork for continued growth in an agency whose market share is increasing (Business Week 1980).

Agencies in different stages of development are likely to require different emphasis on such managerial functions as facility and program development, leadership, marketing, and financial control. In terms of functional skills increasing life-cycle patterns require skills predominantly related to innovation and an intimate knowledge of recreation technology; whereas in agencies that have plateaued, administrative skills may be of greater importance. Emphasis shifts from the good innovator-technologist manager to the good administrative manager (Crompton and Hensarling 1978).

Marketing Implications

From a marketing perspective it should be possible to identify typical strategies that may be appropriate for different types of cycles:

Increasing Cycles

Kotler (1980) has outlined several ways in which recreation and park agencies could try to sustain their increasing market share in an increasing cycle or in the regrowth stage of the cycle-half recycle. The overall market strategy is to continue improvement in all aspects of service delivery, greater market penetration, and increased market share.

Although their services are expanding, these cities can expect new competitors to enter the market—especially those from the commercial recreation sector who are attracted by the profit potential of an expanding market. For example, a major commercial leisure operator has adopted a policy of opening leisure centers adjacent to public agency centers three to five years after the public centers have opened. The operator believes that the public agency will take all the high risks associated with a new facility and create demand for the service; the operator may then enter the market with newer facilities offering a superior product, and take business away from the public operation. In order to maintain the support necessary for continued market share increases in this competitive environment, municipal recreation and park agencies must constantly offer new creative and necessary services.

Decreasing Cycles

In decreasing cycles or in declining stages of other cycles, e.g., the classical and cycle-recycle types, the recreation and park manager can either let the decline continue or attempt intervention to reduce it. If allowed to continue, a decreasing cycle will ultimately lead to one of three possible outcomes. The first of these is death, meaning that recreation and park services
would go out of existence. This is unlikely to occur because recreation and parks have been accepted as a legitimate civic responsibility in major cities for over a hundred years and as such would appear to be endemic. It is politically inconceivable in any city that basic municipal facilities such as parks would be totally abandoned or legislated out of existence. This is an important distinction to make in applying the product life-cycle concept to the public and commercial sectors. In the public sector elimination is unlikely: Even if its non-monetary "collective good" or "superior merit" values are measured, and a cost-benefit analysis undertaken demonstrating that costs exceed benefits, political realities are likely to prevent elimination.

The second possible outcome of a decreasing cycle is a merger. Recreation and park services may no longer be considered a viable unit on their own, in which case the delivering agency would be merged with other agencies whose functions were compatible. Examples of this are emerging. In some jurisdictions, recreation and park departments have been absorbed into larger human resources departments. Under this new umbrella, market share of resources for recreation and parks may continue to decline; alternatively, by being part of a larger agency, managers may be better able to secure the political support necessary to maintain or increase their level of service.

The third possible outcome is petrification, a low plateau cycle. It is possible that some cities may seek to hasten the decline process in order to reallocate these resources to an alternative use. However, for the reasons cited above, recreation and parks' market share can probably be reduced only to a threshold level, adequate for retaining the integrity of parks as part of the existing townscape. Petrification suggests that recreation and parks will remain available indefinitely as a city service, but that its market share will be extremely low, since it will be reduced to providing only core services.

The existence of cycle-recycle curves suggests that the preferred option for managers in cities with decreasing cycles is to reduce the rate of the decline or to reverse it by some form of intervention. If an effort is not made to revive a declining cycle, then retrenchment of recreation and park services may be premature. This intervention could include such actions as price reductions, increased distribution of demanded services, increased quality of marginal services, and additional promotion and advertising. These strategies follow Levitt's notion of market stretching (Levitt 1965). Market stretching extends the original life cycle into a secondary life cycle. At some point in the decline period or before its onset, some modification is made in the marketing mix to facilitate renewed growth rather than continued decline into petrification.

If market stretching can be achieved, the implied result will be greater public support for recreation and parks, reflected in a larger share of a city's budget. Market stretching could be achieved by innovating at the product-line, product, or brand levels. At the product-line level, the number of lines may be expanded to include, for example, the cultural arts. At the product
level, services may be expanded to include the performing arts, while at the brand level, specific programs such as ballet or folk dance may be introduced.

However, in some cases market stretching may not be feasible. For example, political constraints may prevent recreation and park agencies from developing either new programs or new markets. Such strategies may be perceived as impinging upon the "turf" or sensibilities of other agencies, (e.g., education, continuing education or geriatric services, which are already active in the proposed expansion areas), and for this reason be politically untenable. Implementation of product stretching may also be frustrated by the inability of an agency to control its resources. If some recreation and park services are subjected to budget cuts, the agency may not have the authority to redirect or redeploy any of these resources to garner renewed support in other service areas.

Plateau Cycles

Dhall and Yuspeh (1976) point out that there are many commercial examples of plateau-cycle curves. In addition, they suggest that many products may never face a decline, for they satisfy some basic need, such as transportation, entertainment or health. Some recreation and park services would also appear to fit into this category of a basic need. Marketing strategy in a plateau cycle would be concerned with holding the current market share and then utilizing some of the strategies discussed in the previous section on decreasing cycles to move up from the plateau.

Conclusions and Recommendations

This paper has empirically identified the existence in the delivery of municipal recreation and park services of five product life-cycle patterns in addition to the traditional bell-shaped cycle. These six product life cycles were similar to those observed by Cox (1967) in his study of commercial ethical drug products. The confirmation of these particular six cycles (Figure 3) tends to suggest that they are a basic set, and that other cycles identified in the literature are only slight variations or early stages of these six basic cycles.

Cox's (1967) findings—that life-cycle types 1, 2, 3, and 5 (Figure 3) had a tendency to gravitate toward the cycle-recycle curve (Figure 3, type 6), and that this was the basic cycle, not the classical bell-shaped curve, need to be verified through future replication of this study.

The most common life-cycle pattern revealed in this study was the increasing cycle (Figure 3, type 2). Cities with a growing market share (types 2 and 5 combined) were more prevalent than those cities with a decreasing cycle (types 1, 3, and 6 combined) by 50 percent to 36.8 percent. This finding is contrary to the commonly held belief within the municipal recreation and parks field that market shares of total city expenditures are slipping and that the most common cycle is a decreasing pattern.

Tellis and Crawford's (1981) evolutionary approach to product growth may be appropriate for describing the cycles at the level of the firm that was
investigated here. At this level, concern is not with the cycles of individual programs, but with evolving patterns of aggregated services over a long time period. Thus, changes are cumulative as well as successive, each building on previous changes to produce an improved service, much like that of the evolution of natural species in nature. These services are in a state of constant evolution fostered by market dynamics and managerial creativity. This evolution presumably proceeds in a direction of greater efficiency, complexity, and diversity.

The results reported here suggest that recreation and park managers should not base marketing strategies on the classical product life cycle without empirically verifying that this is the correct model. There is a need to realize that a number of product life-cycle patterns have been found. The product life cycle may be a dependent variable, and marketing strategy may be both a response to and an effective agent on the cycle. This understanding is fundamental if the product life-cycle concept is to be used in adopting appropriate marketing strategies.

References


