

66322

NCJRS

MAR 24 1980

ACQUISITIONS

PATTERNS IN COMMITMENTS TO  
MASSACHUSETTS HOUSES OF CORRECTION  
A TREND ANALYSIS

Prepared by:

Charles Metzler  
Research Unit

Massachusetts Department of Correction

Frank A. Hall  
Commissioner

June, 1978

PUBLICATION # 10607 - 17 - 250 - 6-78 - CR  
APPROVED BY: Alfred C. Holland, State Purchasing Agent

66324

ABSTRACT

This report identifies trends in commitments to Massachusetts houses of correction (county facilities) for the years 1932 to 1976. In overall commitment totals, the trend was strongly downward, from a high in 1934 of 16,298 to a low of 2,903 during 1974. The age at commitment has also shifted over this period with more commitments at younger ages in recent years than in the past. Moreover, the proportional distribution in offense categories has recently shifted with the highest percentage in property and drug offenses instead of in "other" offenses. Finally, a significant trend now occurs in the sentence distributions with commitments receiving longer sentences and fewer commitments in lieu of fines.

TABLE OF CONTENTS

<u>TITLE</u>	<u>PAGE NUMBER</u>
1. Introduction	1
1.1 Statement of Purpose	1
1.2 Methodology	1
1.2.1 Data Source	1
1.2.2 Data Analysis	1
2. Findings	2
2.1 Overall Population Trends	2
2.2 Trends in Age At Commitment	2
2.2.1 Long-Term Trends (1932-1976)	4
2.2.2 Short-Term Trends (1967-1976)	4
2.3 Trends in Offense	4
2.3.1 Long-Term Trends (1932-1976)	5
2.3.2 Short-term Trends (1967-1976)	6
2.4 Trends in Sentence	6
2.4.1 Long-Term Trends (1932-1976)	6
2.4.2 Short-Term Trends (1967-1976)	7
2.5 Trends in the Specific Institutions	7
2.5.1 Long-Term Trends (1932-1976)	7
2.5.2 Short-Term Trends (1967-1976)	8
3. Summary	8
4. Appendix	9
5. Bibliography	14

1. INTRODUCTION

1.1 Statement of Purpose

While the primary concern of the Massachusetts Department of Correction is to provide correctional facilities for offenders sentenced by the courts to state institutions, a secondary responsibility is to establish standards for the county facilities. Most of the research effort by the Department has been concentrated on the state institutions and little attention has been focused on the county facilities. Although some descriptions of trends in overall populations have been done in the past, little effort has been made to determine any patterns or changes which may have occurred in the county commitment populations even though data has been provided yearly.

This report is an effort to identify such trends. The data from the years 1932 through 1976 was analyzed to discover discernible trends in (1) the total commitments by county institutions and (2) the offender's age, offense, and sentence. The analysis includes a number of statistical tests as well as time series analysis.

1.2 Methodology

1.2.1 Data Source

Data was collected from the Massachusetts Department of Correction Yearly Statistical Reports from 1932 to 1976. The information was available for age at commitment, institution committed to, offense and sentence received for all individuals committed by the courts to Massachusetts Houses of Correction during each calendar year. The year 1932 was chosen as the first year in the series since earlier data was not collected and recorded in the same manner as subsequent years.

1.2.2 Data Analysis

Time series analysis and a number of statistical tests were employed to determine trends. After reviewing various statistical techniques, four statistical tests were chosen according to their efficiency and appropriateness.<sup>1</sup>

---

1. Daniel's Test and the Mann-Kendall Test are non-parametric statistical tests for trend detection and were chosen as the major tests since they both have an asymptotic relative efficiency of .98 relative to the parametric test based on the regression coefficient  $b$ , and are considered to be the most powerful non-parametric statistical tests for trend detection. The runs test and the runs-up-and-down test were used as checks. (SEE: Bradley, 1968)

The time series analysis consisted of the determination of the trend and the utilization of a procedure<sup>2</sup> to document cycles. Seasonal variations were not controlled for since data is available for yearly figures only.

The tests were computed on the percentage (proportion) of the total population for each category and not on the actual number in each category. This was done to gain a better measure of the trends by reducing the impact of shifts in population totals. For this reason, trends in the population proportions are of more interest than trends in the raw numbers, themselves.

## 2. FINDINGS

### 2.1 Overall Population Trends

The overall commitment totals show strong downward trend between the years 1932 and 1976 (SEE: Figure 1 on Page 3 ). The commitment totals range from 16,292 in 1932 to 2,903 during 1974. The trend line on the graph illustrates this downward trend. The broken line on the graph represents five-year moving averages which identify the following cycles: A decreasing population was experienced until the late 1940's. At that time, the county facilities experienced increasing populations which lasted through the late 1950's. The longest decline in commitment populations has been in effect from the late 1950's through the mid-1970's.

### 2.2 Trends in Age at Commitment

Analysis of age categories for the commitment population reveals significant long and short term trends. The analysis considers the following age categories: 16 or less, 17, 18, 19, 20, 21-24, 25-29, 30-39, 40 and over.

<sup>2</sup> Five year moving averages (SEE: Spiegel, 1961 Pp 283-288)

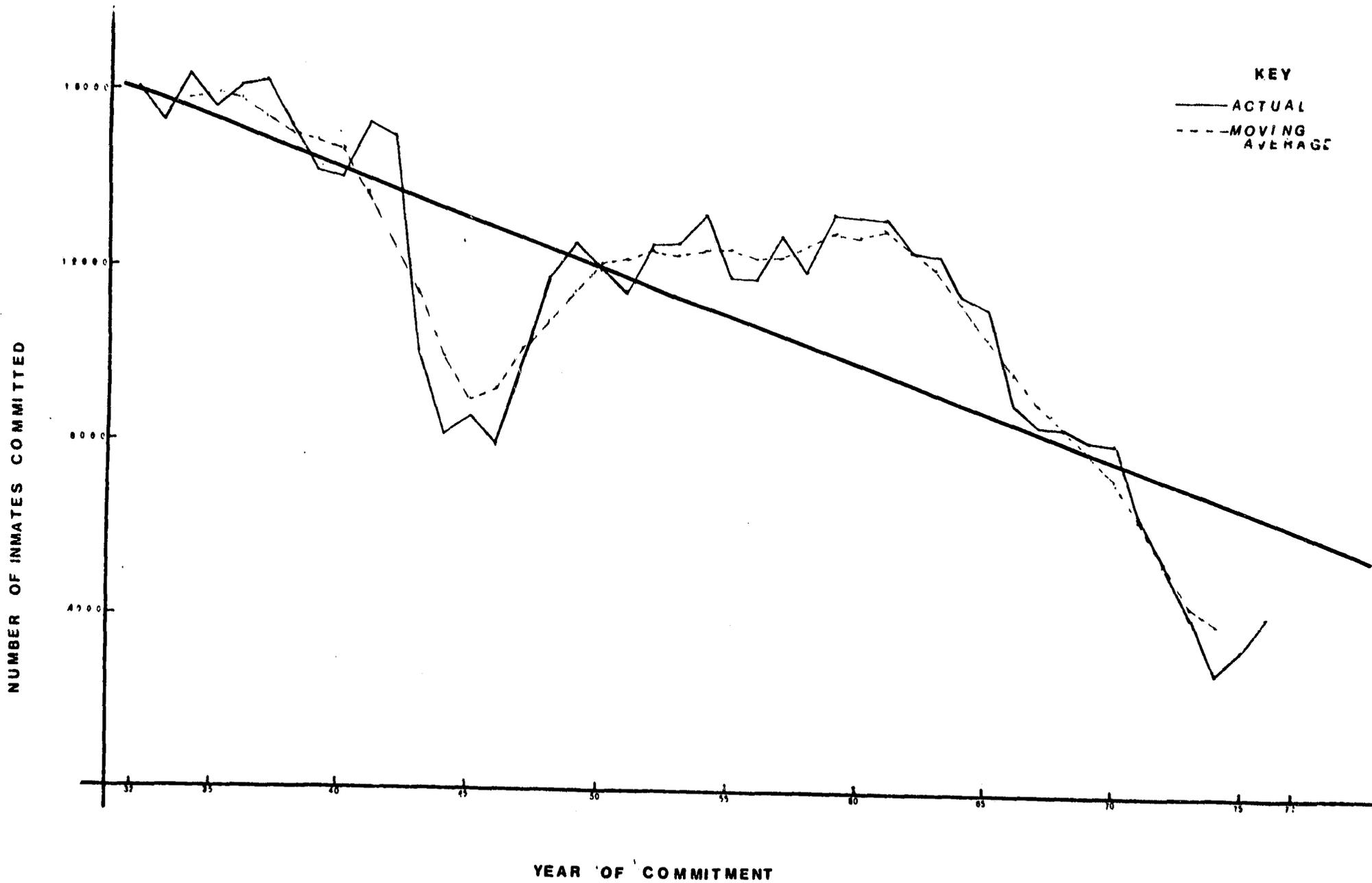


FIGURE 1: NUMBER OF INMATES COMMITTED BY YEAR (1932-1976)

### 2.2.1 Long-Term Trends (1932-1976)

The county facilities in Massachusetts have experienced a substantial change in the age distribution of their commitment population. The trend has generally been toward fewer commitments at older ages and, conversely, more commitments at younger ages. Strong downward trends are evident in the proportion of inmates committed in the "30-39" and "40 and over" categories. In 1951, commitments aged 40 and over reached a high of 61% and in 1975, a low of 8%. Strong upward trends are noticed in commitments of ages 17, 18, 19 and 20.<sup>3</sup> The age category "16 or less" represents juveniles bound over and convicted as adults. There is no trend in the population distribution for these juveniles.

### 2.2.2 Short-Term Trends (1967-1976)

Short term trends for age distributions are similar to the long range trends. That is, there have been fewer commitments at older ages and, conversely, more commitments at younger ages with the pivot occurring between the ages 29 and 30. In other words, a downward trend exists in the proportion of those committed at age 30 or more and upward trends for those aged 17 to 29. Also, similar to the long range analyses is the stability of the bound over juveniles aged 16 or less. Although downward trends occurred in both categories analyzed which were 30 years and over, the greater correlation occurred in the "40 and over" category.

### 2.3 Trends in Offense

Analysis of the offense committed for the county commitment population identifies significant long and short term trends. The analysis considered the following offense categories and sub-categories:

- (1) Person Offenses: Manslaughter, assault, other person
- (2) Sex Offenses: Rape, other Sex
- (3) Property Offenses: Burglary, larceny, other property

<sup>3</sup> Due to a change in the categorizing system during and preceding 1952, it is impossible to compute long-range trends for the age categories "21-24" and "25-29".

- (4) Narcotics Offenses
- (5) Other Offenses: drunkenness, non-support, motor vehicle, other

### 2.3.1 Long Term Trends (1932-1976)

The distribution of the offense categories for commitments to Massachusetts houses of correction has significantly shifted. The strongest changes occurred in convictions for drunkenness, narcotics and burglary. Person offenses and other offenses (excluding drunkenness) demonstrated only slight upward trends. No significant trends were found for rape and other sex offenses.

In 1942, the proportion of commitments convicted of drunkenness reached a high of 71% and has consistently decreased through the years. In 1973, drunkenness was decriminalized so there have been no new commitments for drunkenness after July 1, 1973. The percentage of commitments for narcotics offenses was less than 1% each year until 1967. The percentages increased until a high of 9% occurred in 1974. After this time, the percentage of commitments for narcotics offenses has remained at 7% of the total.

A breakdown of property offenses reveals the following: commitments for burglary demonstrated a strong upward trend ranging from 1% of the total commitment population in 1942 to 20% in 1976. The proportions of commitments for the offense of larceny has remained stable through the years. The proportion of commitments for the other offenses against property experienced a significant upward trend.

A breakdown of offenses against the person reveals slight upward trends for assault and other offenses against the person. The proportion of commitments for manslaughter remained stable. Analysis of the "other" offenses (excluding drunkenness) discloses that: non-support demonstrated no significant trend, while motor vehicle offenses as well as the "other offense" categories maintained slight upward trends in the proportion of the commitment populations.

### 2.3.2 Short Term Trends (1967-1976)

Similar to the long term trends, narcotics offenses and property offenses exhibit strong upward trends, while drunkenness demonstrates a strong downward trend. One distinct difference from the long range analysis is the very strong downward trend occurring for the offense of non-support. An upward trend was noted for the proportions of commitments convicted of offenses against the person. The stability of rape and other sex offenses is comparable to the long range analysis while the mixed trends occurring in the other offenses category tend to differ.

The proportions of commitments convicted of drunkenness experienced a high of 51% in 1968 and disappeared altogether after July 1, 1973 when the decriminalization went into effect. Strong upward trends in the percentage of commitments were evident in all three breakdowns of offenses against property, (i.e., burglary, larceny, and other property). Upward trends occurred in commitments convicted for assault and other offenses against the person as was the case in the long range analysis. The stability of commitments for manslaughter showed a similar trend. Analysis of the other offenses (excluding drunkenness) revealed a very strong downward trend for non-support while both motor vehicle offenses and "other" offenses demonstrated upward trends.

## 2.4 Trends in Sentence

Analysis of the sentence received reveals significant long and short term trends. The analysis considers the following sentence categories: Fine, 1 month and less, 2 months, 3 months, 4 months, 5 months, 6 months, 7 to 11 months, 1 to 2 years, 2 years and more.

### 2.4.1 Long Term Trends (1932-1976)

County facilities are now receiving commitments with longer sentences than in the past. Downward trends exist for sentences of 2 months, 4 months and 5 months. The proportion of offenders committed on a fine has also decreased significantly throughout this period. The categories 1 month and less and three months remained stable and no significant trend was identified. For all sentences of six months or more, an upward trend appeared with the category 1 to 2 years displaying the strongest upward trend.

#### 2.4.2 Short Term Trends (1967-1976)

Short range trends for the sentence received are similar to long range trends in that both show a shift from shorter sentences to longer sentences. Commitments with sentences of one month and less as well as those committed in lieu of a fine experienced downward trends. No significant trend was found for commitments to a term of 4 months. Upward trends are evidenced for those committed to terms of 2 months, 3 months, 5 months, 6 months, 7-11 months, 1-2 years and 2 years and more. The stronger of the upward trends occurred in the 5 months, 6 months, and 1-2 years categories.

### 2.5 Trends in the Specific Institutions

#### 2.5.1 Long Term Trends (1932-1976)

Analysis of trends within each county institution reveals a strong downward trend at Deer Island (low of 9% of the total population in 1973; high of 24% in 1940) and a strong upward trend at Barnstable (low of 1% in 1932; high of 5% in 1975). Upward trends in the distribution of the total population have also occurred at Billerica, Worcester, New Bedford, Plymouth, Pittsfield, Greenfield and Northampton. A downward trend was evident at Salem. Charles Street Jail, Edgartown, Springfield, Lawrence and Dedham Houses of Correction experienced no significant trends in proportion to the total populations over these years.

#### 2.5.2 Short Term Trends (1967-1976)

The population distributions have shifted among the institutions over the past ten years. The most extensive trends over this time period occurred at Charles Street Jail and Billerica House of Correction. Charles Street Jail displayed a strong downward trend in housing commitments ranging from 15% of the total population in 1969 to 1% during 1976. Conversely, Billerica experienced a strong upward trend in housing 13% of the commitments during 1968 to 21% during 1976. No significant trends occurred at Salem, Worcester, Edgartown, Plymouth, Greenfield and Pittsfield Houses of Correction. Other downward trends were found at Deer Island and at Springfield with Deer Island experiencing the stronger trend of these two. Upward trends were documented at Lawrence and Barnstable Houses of Correction as well as small but significant upward trends at New Bedford, Northampton and Dedham.

3. SUMMARY

This report shows that the total number of commitments to the Massachusetts houses of correction has decreased substantially over the period from 1932 to 1976. The commitment totals ranged from 16,298 in 1934 to 2,903 in 1974. There have also been significant trends in age at commitment, institution committed to, offense and sentence. These trends are summarized in the tables in the appendix. Generally, the age at commitment has shifted so that there are more commitments at younger ages now than in the past. The distribution of the offense committed has shifted in that there are fewer commitments for the "other" category and more for property offenses and narcotics offenses. The sentence distributions have also shifted. Commitments are receiving longer sentences now than in the past. There are also fewer commitments in lieu of fines.

APPENDIX

AGE AT COMMITMENT

<u>AGE</u>	<u>SHORT TERM TREND (1967-1976)</u>	<u>LONG TERM TREND (1932-1976)</u>
16 or less	No trend	No trend
17	Strong Upward	Strong Upward
18	Strong Upward	Strong Upward
19	Strong Upward	Strong Upward
20	Strong Upward	Upward
21-24	Strong Upward	*
25-29	Strong Upward	*
30-39	Downward	Strong Downward
40 and over	Strong Downward	Downward

\* Category changes have made analysis impossible for these categories.

OFFENSE

<u>OFFENSE</u>	<u>SHORT TERM TRENDS</u> <u>(1967-1976)</u>	<u>LONG TERM TRENDS</u> <u>(1932-1976)</u>
<u>Person</u>	Upward	Slight Upward
Manslaughter	No Trend	No Trend
Assault	Upward	Slight Upward
Other Person	Upward	Slight Upward
<u>Sex</u>	No Trend	No Trend
Rape	No Trend	No Trend
Other Sex	No Trend	No Trend
<u>Property</u>	Strong Upward	Upward
Burglary	Strong Upward	Strong Upward
Larceny	Strong Upward	No Trend
Other Property	Strong Upward	Upward
<u>Narcotics</u>	Strong Upward	Strong Upward
<u>Other</u>	Mixed	Mixed
Drunkenness	Strong Downward	Strong Downward
Non-support	Strong Downward	No Trend
Motor Vehicle	Upward	Slight Upward
Other	Upward	Slight Upward

SENTENCE RECEIVED

<u>SENTENCE</u>	<u>SHORT TERM TRENDS (1967-1976)</u>	<u>LONG TERM TRENDS (1932-1976)</u>
Fine	Downward	Downward
1 month & less	Downward	No Trend
2 months	Upward	Downward
3 months	Upward	No Trend
4 months	No Trend	Downward
5 months	Strong Upward	Downward
6 months	Strong Upward	Upward
7-11 months	Upward	Upward
1 to 2 years	Strong Upward	Upward
2 years and more	Upward	Upward

SPECIFIC INSTITUTIONS

<u>INSTITUTION</u>	<u>SHORT TERM TRENDS (1967-1976)</u>	<u>LONG TERM TRENDS (1932-1976)</u>
Deer Island	Downward	Strong Downward
Charles Street Jail	Strong Downward	No Trend
Springfield	Strong Downward	No Trend
Salem	No Trend	Downward
Worcester	No Trend	Upward
Edgartown	No Trend	No Trend
Plymouth	No Trend	Upward
Pittsfield	No Trend	Upward
Greenfield	No Trend	Upward
New Bedford	Slight Upward	Upward
Northampton	Slight Upward	Upward
Lawrence	Upward	No Trend
Dedham	Slight Upward	No Trend
Barnstable	Upward	Strong Upward
Billerica	Strong Upward	Upward
TOTAL	Strong Downward	Strong Downward

BIBLIOGRAPHY

Bradley, James. Distribution Free Statistical Tests. Englewood Cliffs, New Jersey: Prentice Hall Inc., 1968.

Siegel, Sidney. Non Parametric Statistics for the Behavior Sciences. New York: McGraw Hill, Inc., 1956.

Spiegel, Murray. Theory and Problems of Statistics. New York: McGraw Hill, Inc., 1961.

**END**