

# Image Cover Sheet

**CLASSIFICATION**

**SYSTEM NUMBER**

508655

UNCLASSIFIED



**TITLE**

PRELIMINARY ASSESSMENT OF OCPD VERSUS PREVIOUS TERMS OF SERVICE

**System Number:**

**Patron Number:**

**Requester:**

**Notes:**

**DSIS Use only:**

**Deliver to:**



DEPARTMENT OF NATIONAL DEFENCE  
CANADA



OPERATIONAL RESEARCH AND ANALYSIS

D MAN A RESEARCH NOTE 2/92

PRELIMINARY ASSESSMENT OF OCDP  
VERSUS PREVIOUS TERMS OF SERVICE

by

A. Chouinard

Directorate Research Notes are written to document material, which does not warrant or require more formal publication. The contents do not necessarily reflect the views of the Establishment or the Department of National Defence.

OTTAWA, CANADA



National Défense  
Defence nationale



DEPARTMENT OF NATIONAL DEFENCE  
CANADA

OPERATIONS RESEARCH AND ANALYSIS  
DIRECTORATE OF MANPOWER ANALYSIS

D MAN A RESEARCH NOTE 2/92

PRELIMINARY ASSESSMENT OF OCDP  
VERSUS PREVIOUS TERMS OF SERVICE

by

A. Chouinard

Directorate Research Notes are written to document material, which does not warrant or require more formal publication. The contents do not necessarily reflect the views of the Establishment or the Department of National Defence.



TABLE OF CONTENTS

	<u>PAGE #</u>
TABLE OF CONTENTS . . . . .	i
BACKGROUND . . . . .	1
DESCRIPTION OF TERMS OF SERVICE . . . . .	1
AIM . . . . .	3
METHODOLOGY . . . . .	4
COHORT GROUPINGS SELECTED . . . . .	7
RESULTS. . . . .	9
DISCUSSION OF RESULTS . . . . .	18
CONCLUSIONS . . . . .	24
REFERENCES . . . . .	25





PRELIMINARY ASSESSMENT OF  
OCDP VERSUS PREVIOUS TERMS OF SERVICE

INTRODUCTION

BACKGROUND

1. The Directorate of Personnel Career Administration Officers (DPCAO) requested a study to compare the current terms of service for Canadian Forces (CF) officers, the Officer Career Development Plan (OCDP), with the previous terms of service for officers. The OCDP was introduced in 1976 to redress certain perceived problems within the officer corps, and introduced the concept of phased retention of officers within the CF. According to Reference 1, some of the problems within the officer corps were:

- a. high attrition of Regular Officer Training Plan (ROTP) officers at obligatory service;
- b. rank stagnation at the captain level;
- c. lack of personal flexibility for officers who did not wish to serve to compulsory release age;
- d. an excessive average age for junior officers;
- e. a lack of management flexibility to adjust the personnel inventory to meet new or changing requirements.

DESCRIPTION OF TERMS OF SERVICE

2. In 1976 the OCDP system replaced the existing terms of service for officers. The old plans included three terms of service that originated with the single services (Navy, Army and Air Force) that were phased out in 1968, in which each

service defined compulsory retirement age (CRA) according to rank and age in a range from 45 to 55. A unified contract was introduced with integration in which maximum service for everyone was 28 years<sup>1</sup>, effective for all officers that joined since 1968 and for those that accepted it. This single-service contract introduced the indefinite period of service, and is referred to in this paper as the old IPS (OIPS). For all these terms of service, one common aspect was that a two percent penalty on earned pension for every year the officer was short of CRA, was assessed against any officer that voluntarily took an early release.

3. When the OCDP was introduced in 1976, some officers on strength were offered conversion of terms of service. With the acceptance of the OCDP, some features of previous terms were retained, but the three tier system that was created introduced some major new features:

- a. the short engagement (SE) covers the officer from commissioning to 9 years of commissioned service (YCS). An officer released during this period is entitled to a return of pension contributions. If released at the end of the SE a gratuity is paid to the officer equivalent to one month's pay for each YCS;
- b. an offer of an intermediate engagement (IE) is made to promising individuals prior to the end of the SE (as early as third or fourth YCS). The IE extends the contract to 20 years of service (YOS) (the latter of 20 YOS or age 40 defined the 20/40 point before the Supreme Court ruling on age in 1988). An officer released during the IE has an option of a deferred annuity or a return of pension contributions, but the entitlement to the gratuity is lost. If released at the end of the IE, the officer is entitled to an immediate unreduced annuity valued at 40% of income;

---

<sup>1</sup> Although commonly referred to as the 28 YOS point, for officers at the rank of Colonel or above this compulsory contract period extends to 30 YOS.

- c. an offer of an indefinite period of service (IPS) (not the OIPS) is made to selected officers prior to the end of the IE. This contract extends an officer's service to age 55. Any IPS officer that voluntarily takes an early release is guaranteed a 20 year pension but is penalized two percent on earned pension for every year short of 28 YOS. Any officer who passes the 28 YOS point is thereafter entitled to an unreduced pension on release; and
- d. where an IPS is not offered by 20 YOS, a continuing engagement (CE) can be offered to an officer, normally for a duration of two years. There is no penalty for anyone released from a CE; as for all others, earned pension is valued at two percent for each year completed in service.

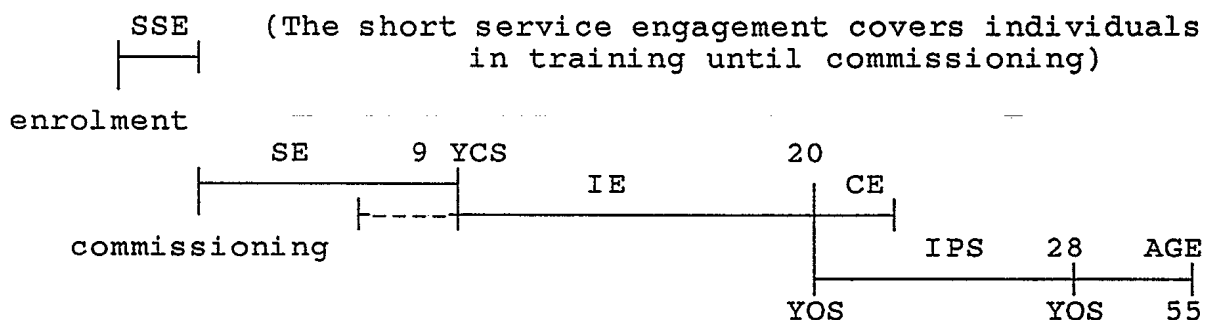


Figure 1 - OCDP Three Tier System

AIM

4. The aim of this study is to compare the attrition rates experienced under the OCDP with those under the old system, referred to as OIPS, and to indicate changes in the characteristics of the personnel inventory that would have accompanied OCDP.

## METHODOLOGY

5. This study will be conducted in two phases; the first phase documented in this project report evaluates the effect OCDP may have had on officers on strength in 1976. As well, it will attempt to determine whether there is any difference between those who converted to the OCDP and those who were enroled directly under the OCDP. The second phase will go into further detail, assessing terms of service in conjunction with the main entry plans and different occupations.

6. Historical data used in this study consists of the inventory of personnel on strength for each calendar year. The source of all personnel data was the military personnel information system (MPIS) release tapes and annual historical tapes from 1976 to 1989. Each MPIS record contains information such as: entry plan, terms of service, occupation and enrolment date. Only records of officers that had completed initial training were included because a measure of attrition due to individual resistance to terms of service was desired, not a measure of early attrition due to training system selection. This study was also primarily restricted to officers in the CF's larger general service occupations, plus those of pilot and air navigator, to avoid idiosyncrasies that might be introduced from smaller occupations with unique employment patterns.

7. Using identification numbers, each individual officer can be followed through the database from year to year. Various aspects of a career can be tracked this way, but in this study the time in a career at release and the terms of service under which the officer was engaged are of interest. The time of service is expressed as YOS or YCS--the use mainly dependent on whether the officer passed the 9 YCS point.

## Cohort Analysis

8. The field of manpower analysis that examines the survival of a group of persons that are recruited around the same time is referred to as cohort analysis. It is possible to establish attrition patterns by comparing the behaviour of cohorts from year-to-year, or of groups of cohorts as major policy changes are introduced. In this particular study, the attrition pattern derived depicts how officers in cohort groups left under different terms of service in an attempt to identify causal relationships with CF policies.

9. Initial CF attempts at cohort analysis simply counted, in each calendar year, the number of individuals who shared the same attributes. This approach could only identify the difference in numbers present at the end of each year (details are found at Reference 2). A new approach used in this study follows each individual through the database, and should be more accurate since it shows which specific officers definitely left the cohort each year. A tool for this purpose was developed as a computer model that is written using the FOXPRO database utility and is documented at Reference 3.

10. To form a cohort individuals are grouped according to a time characteristic, for example, all those commissioned the same year. The flow pattern for the cohort is then derived, albeit within the limitations of the available database. The number of officers that leave the CF or change terms of service within a cohort group is determined for each year tracked.

11. In this study a cohort is the set of individuals commissioned or enroled in the same year. A cohort group is made up of cohorts with origins under similar policies. For example the cohort group covering the commissioning dates from

1973 to 1976 embraces the four cohorts commissioned in 1973, 1974, 1975 and 1976; each cohort is made up of the sub-cohorts that represent the various engagement types.

12. Note that older cohorts yield no information on the early years of a career since data prior to 1976 is not readily available; and conversely newer cohorts yield information for only a few years early in a career since they have not been in the CF long enough. Most cohorts examined provide about 14 years worth of information. For example, the cohort of officers enroled in 1967 will yield information from 9 to 22 YOS, which corresponds to the 14 year span from 1976 to 1989. Similarly, the cohort of officers commissioned in 1971 will yield information for the period from 5 to 18 YCS. By combining the information from different cohorts we can infer patterns that might be valid for longer time ranges.

Attrition Rate

13. The attrition rate is defined as the number of releases divided by the strength at the beginning of a specific time period. For each cohort under each of the terms of service, an attrition distribution is obtained by computing all the attrition rates along the YCS or YOS axis.

14. An average attrition curve is computed over all cohorts in the cohort grouping as the weighted mean of the attrition rates<sup>2</sup> at each point of the x axis. (The weights are the

---

<sup>2</sup> Example:

$$A_j = \frac{\sum_{i=1}^n S_{ij} \times (R_{ij}/S_{ij})}{\sum_{i=1}^n S_{ij}} = \frac{\sum_{i=1}^n R_{ij}}{\sum_{i=1}^n S_{ij}}$$

where  $A_j$  = average attrition at the  $j^{th}$  YCS (or YOS)  
 $S_{ij}$  = strength in  $i^{th}$  year with  $j$  YCS (or YOS)  
 $R_{ij}$  = number of releases in  $i^{th}$  year with  $j$  YCS (or YOS)  
 $n$  = number of years to be averaged

initial strengths for each time period, or the denominators of the attrition rates). There is a margin of error associated with these average attrition curves, so when looking at the resulting graphs, if curves are very close, the variation may be attributed to chance.

15. When attrition rates are computed using small numbers, large fluctuations occur, so average attrition rates based on small numbers are ignored. Any cohort strength of less than 50 is considered to be too small to be analyzed; and such small numbers occur at either end of the attrition curves and in some curves with insufficient data.

#### COHORT GROUPINGS SELECTED

16. In 1976 officers on strength under the OIPS were offered conversion to OICDP according to the scheme outlined in Table 1. The different offers were based on the time in service of an officer, and created five distinct conversion processes.

17. The cohort model was used to:
- a. select the engagement type under which an officer serves, and to identify when an officer changed terms of service as a way to track cohorts;
  - b. form sub-cohorts, one for each contract to be assessed, namely: SE, IE, IPS, OIPS;
  - c. select the commissioning date or the engagement date (retirement based engagement [RBE] date was used), as the base criteria of the cohort;
  - d. determine the range of years of interest;
  - e. group cohorts where possible to increase the numerical base being manipulated; and
  - f. track the cohorts from 1976 to 1989.

Table 1: OCDP Implementation Scheme

(Summarized from Annex A of Reference 1)

Case	Status in 1976	OCDP Policy on Implementation	How Cohort Model Was Used
1	YCS $\leq$ 3	offered SE	commissioning date 1973 to 76
2	3 < YCS < 9	offered IE	♦ RBE date 49 to 73 ♦ commissioning* date 68 to 73
3	YCS $\geq$ 9 but YOS $\leq$ 17	no offer, however would be offered IPS upon reaching retirement age or 17 YOS according to quotas	♦ commissioned* <sup>3</sup> before 1968 ♦ enroled after 1959
4	17 < YOS < 20	Maj, LCol and CFR Capt were offered IPS	RBE date 56 to 59
5	YOS $\geq$ 20	IPS offered to LCol, Maj and CFR Capt	RBE date 49 to 56

18. To acquire the data for the study the cohort model had to be run several times to:

- a. isolate each sub-cohort in the implementation scheme;
- b. obtain data on those that were recruited after 1976; and
- c. obtain data on the sub-cohorts that were recruited before 1976.

---

<sup>3</sup> , \* items - filters added to FOXPRO model by the author.



## RESULTS

### GENERAL

19. All officers recruited since 1976 have been under OCDP terms of service. Only 15 years have elapsed since the inception of the OCDP, so no "pure" OCDP officer has served beyond the 15 YOS point. The attrition behaviour of officers enrolled directly under OCDP was examined to compare their attrition patterns with corresponding ones for OIPS officers for a direct evaluation up to 15 YOS.

20. Beyond 15 YOS the attrition patterns of OIPS were compared against converts to OCDP as an indirect means of evaluation; and the attrition behaviour of officers who converted to OCDP under each of the contracts (SE, IE or IPS) was examined separately. Note that while some officers converted to OCDP, others remained on old terms and are treated as "pure OIPS". Although individual behaviour at transition can be influenced by immediate release options available both groups were commissioned together and were subject to the same general service policies and economic pressures, and these two groups are directly comparable. The next offer for "pure OIPS" officers to convert to OCDP was in 1988; now they have in the main either retired or converted.

21. Table 1 conversion process results are summarized in Table 2. The analysis is based on a comparative examination of the attrition behaviour of officers serving under different terms of service. Preliminary results shown here compare, graphs of the generic (or averaged) attrition. Each point on a graph represents the average for a given cohort group at the corresponding period of service counted in years, whether YCS or YOS.

Table 2 - Result Highlights

Case	Particulars	Results
1	<ul style="list-style-type: none"> <li>◆ less than 3 YCS in 1976</li> <li>◆ offered SE</li> </ul>	<ul style="list-style-type: none"> <li>◆ attrition peaks for SE in 4-6 YCS range, not at 9 YCS</li> <li>◆ no significant difference between OCDP and OIPS</li> <li>◆ the 10 YOS point seems to have more impact than the 9 YCS point</li> </ul>
2	<ul style="list-style-type: none"> <li>◆ less than 9 YCS but more than 3 YCS in 1976</li> <li>◆ offered IE</li> </ul>	<ul style="list-style-type: none"> <li>◆ attrition between 10 YOS and 20 YOS is equivalent for IE or OIPS</li> </ul>
3	<ul style="list-style-type: none"> <li>◆ more than 9 YCS less than 17 YOS in 1976</li> <li>◆ no offers</li> <li>◆ possibility for IE/IPS offers later</li> </ul>	<ul style="list-style-type: none"> <li>◆ those who intended to leave accepted the IE offer</li> <li>◆ IPS offers were accepted by those who wished to stay beyond the 28 YOS point</li> <li>◆ those on older terms were uncertain of IPS offers so remained on original terms</li> </ul>
4	<ul style="list-style-type: none"> <li>◆ 17 to 20 YOS in 1976</li> <li>◆ IPS offer</li> </ul>	<ul style="list-style-type: none"> <li>◆ OIPS attrition rises at 20 YOS, is uniform to 26 YOS and peaks at 27 YOS</li> <li>◆ IPS attrition rises at 27 YOS when penalties end</li> </ul>
5	<ul style="list-style-type: none"> <li>◆ more than 20 YOS in 1976</li> <li>◆ IPS offer</li> </ul>	<ul style="list-style-type: none"> <li>◆ same results as in case 4</li> </ul>
6	<ul style="list-style-type: none"> <li>◆ enroled after 1976</li> <li>◆ OCDP only</li> </ul>	<ul style="list-style-type: none"> <li>◆ slight increase in attrition after obligatory service</li> <li>◆ gratuity seems to convince those near 9 YCS to stay on</li> <li>◆ some increase in attrition in 10 to 12 YOS range</li> </ul>

CASE 1 - OFFICERS WITH 3 YCS OR LESS IN 1976

22. In 1976 the four cohorts of officers commissioned between 1973 and 1976, representing those with 0 to 3 YCS,

were offered SE. Data from the four cohorts were averaged together to form two cohort groups--one of those that accepted the offer and one on those that rejected the offer.

23. Figures 2 and 3 compare the attrition patterns by YCS for those that accepted OCDP and those that elected to remain on OIPS. Figure 3 compares the attrition rates of officers on all three terms of service, with OCDP officers separated into their two contract groups.

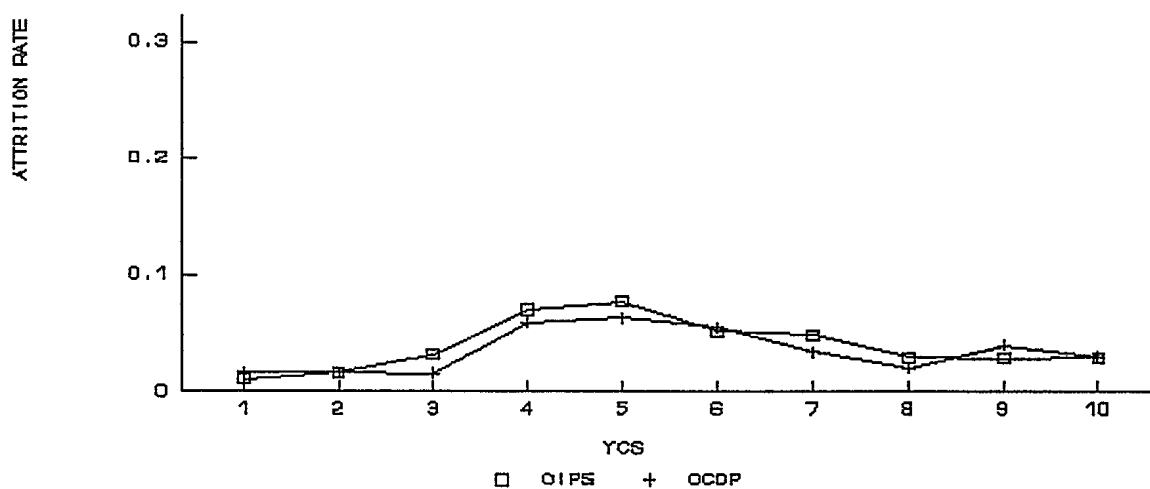


Figure 2: Officers with 3 YCS or less in 1976  
Comparing OIPS against OCDP in YCS

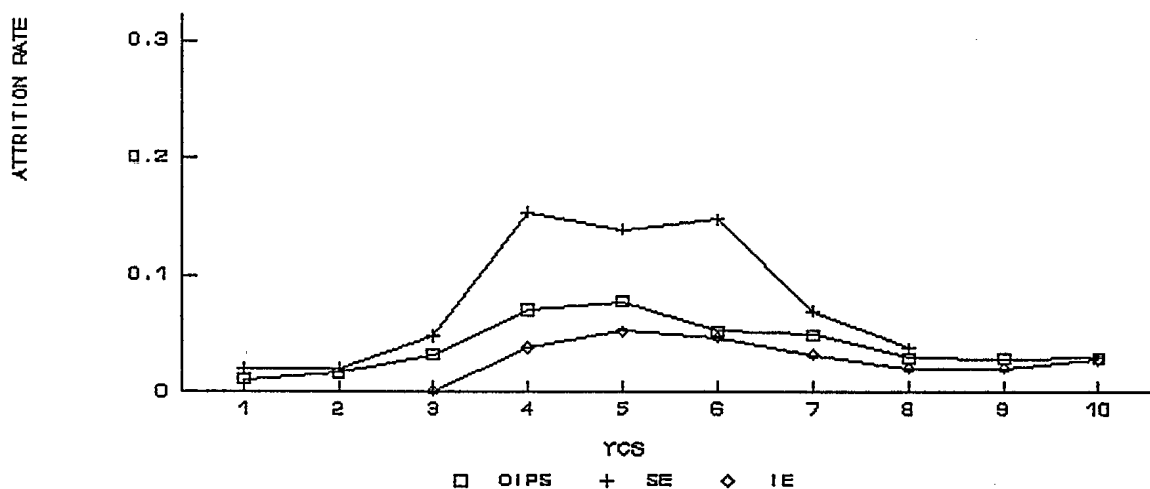


Figure 3: Officers with 3 YCS or less in 1976  
Comparing OIPS against SE and IE in YCS

24. To obtain another perspective attrition behaviour for these cohort groups were examined by YOS. Rates based on small numbers vary widely so values beyond 18 YOS for OIPS officers have not been included in Figures 4 and 5.

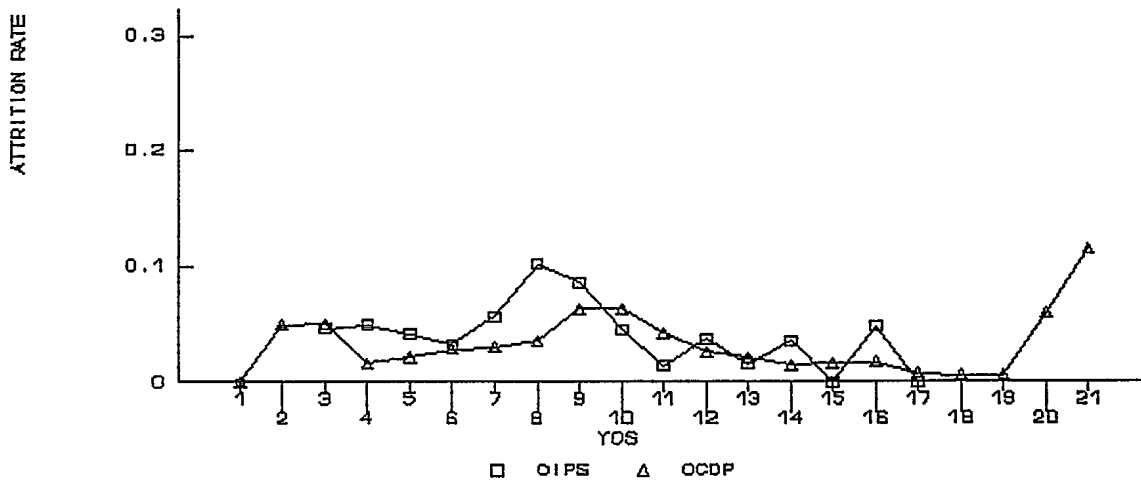


Figure 4: Officers with 3 YCS or less in 1976  
Comparing OIPS and OCDP in YOS

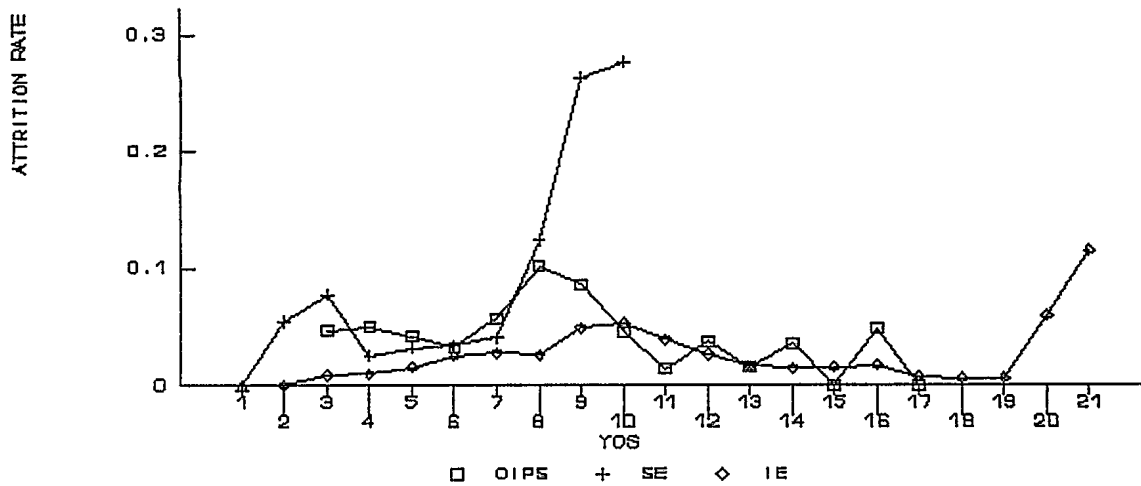


Figure 5: Officers with 3 YCS or less in 1976  
Comparing OIPS against SE and IE in YOS

25. The attrition rate for those that accepted OCDP early in their service (Figure 2) was generally lower than for those on OIPS, but the difference is small relatively to the margin of error associated with each point. The small hump at 9 YCS

indicates that only a few of the early converts (30 officers) took advantage of the 9 YCS gratuity. The highest attrition rates in Figures 2 and 3 occurred in the 4 to 6 YCS range, well before mandatory departure at 9 YCS. In comparison the attrition rates in Figures 4 and 5 had a significant attrition rate at 9-10 YOS. For whatever reason, Figures 2 to 5 indicate that of the officers that switched to OCDP, a large number left well in advance of the 9 YCS point. Of note however is that in fact the two groupings represent the same cohort of individuals sorted on a different parameter.

26. The 8-10 YOS attrition peak under OCDP/IE is lower than and lags that under the OIPS. Beyond the 10 YOS point IE and OCDP officers are one and the same, and attrition behaviour is smooth. That for OIPS officers oscillates somewhat, (Figures 4 and 5) possibly influenced by such factors as small numbers. Some officers on OIPS were offered IPS after 17 YOS, so OIPS numbers drop for reasons other than attrition. Those officers with less than 3 YCS in 1976 are just reaching 20 YOS, and another two to three years are required before behaviour patterns can be established for this cohort group.

#### CASE 2 - OFFICERS WITH MORE THAN 3 AND LESS THAN 9 YCS

27. Those officers commissioned between 1968 and 1972 joined under OIPS, had between three and nine YCS in 1976, and were offered IE upon the introduction of the OCDP. Cohorts were tracked by YOS (commissioning date is not relevant beyond the SE; years are counted from the RBE date). Figures 6 and 7 provide a comparison of the attrition rates of those that accepted an IE offer (CE and IE data were combined) with those who remained under the OIPS term of service. The attrition curve for OIPS terminates at 22 YOS because of small numbers.

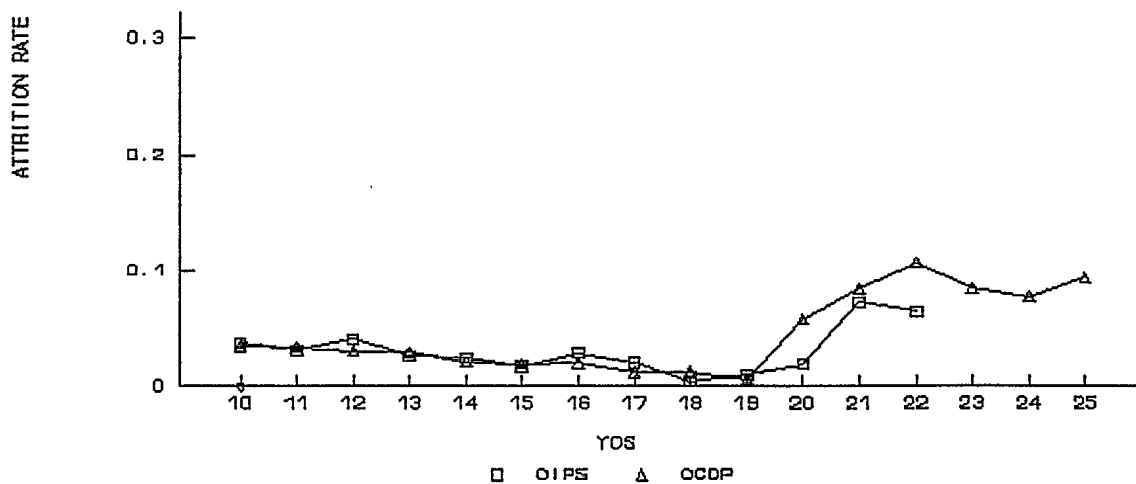


Figure 6: Officers Commissioned from 1968 to 1972  
Comparing OIPS and OCDP in YOS

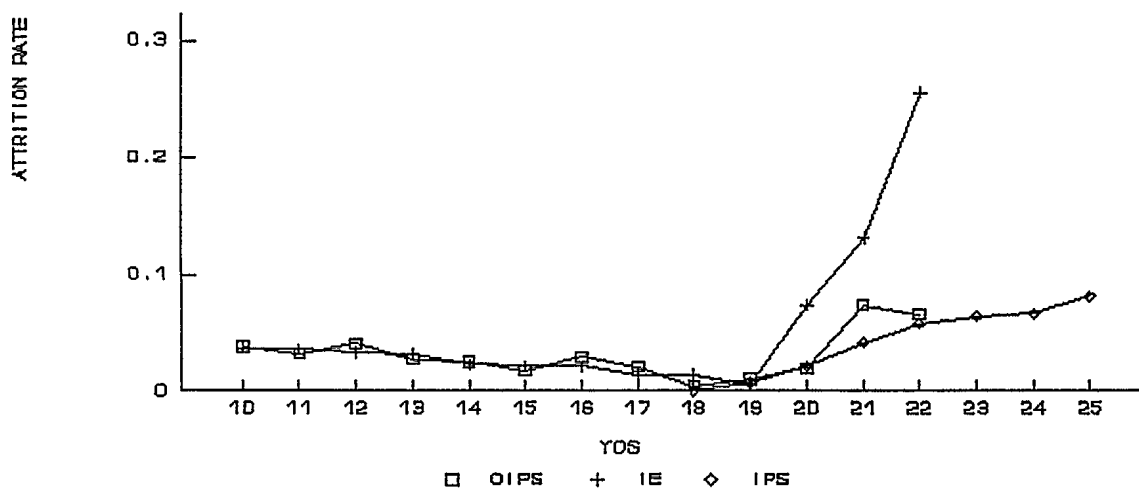


Figure 7: Officers Commissioned from 1968 to 1972  
Comparing OIPS against IE and IPS in YOS

CASE 3 - OFFICERS WITH MORE THAN 9 YCS BUT LESS THAN 17 YOS

28. The data is filtered to retain only officers: enroled since 1959, commissioned in one of the three services before 1968, had less than 17 YOS and more than 9 YCS in 1976 and formed cohorts from 1959 to 1968. No OCDP offer was made in 1976 to this group but the officers were considered for

conversion to IE/IPS within the conversion zone of 18 to 20 YOS. Figures 8 and 9 compare attrition patterns of all officers in this group with the OCDP.

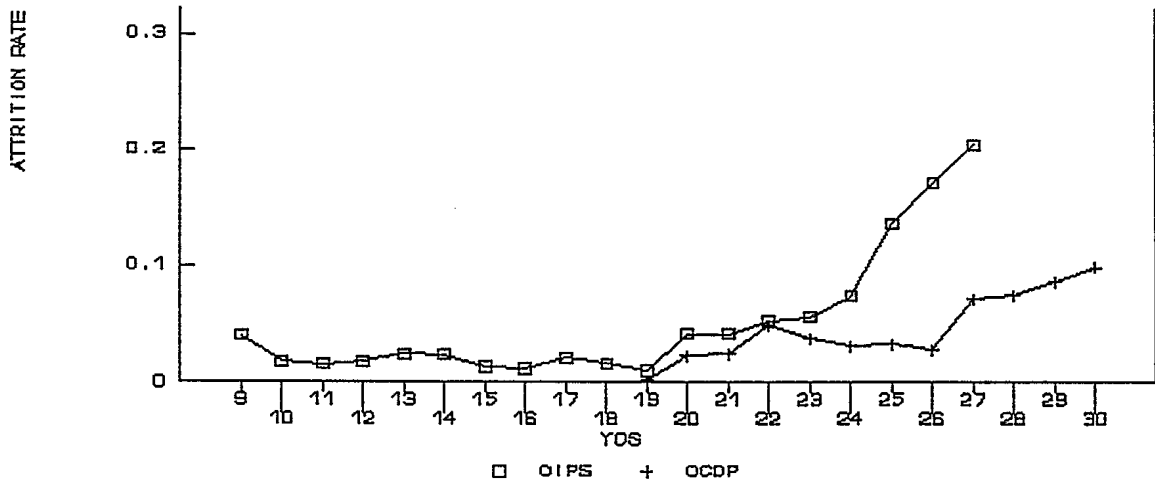


Figure 8: Enroled since 1959 and Commissioned by 1968  
Comparing OIPS and OCDP in YOS

29. The sharp increases in OCDP attrition correspond: to the end of the CE at 22 YOS (CE included with the IE numbers), to the beginning of the guaranteed pension period following 20

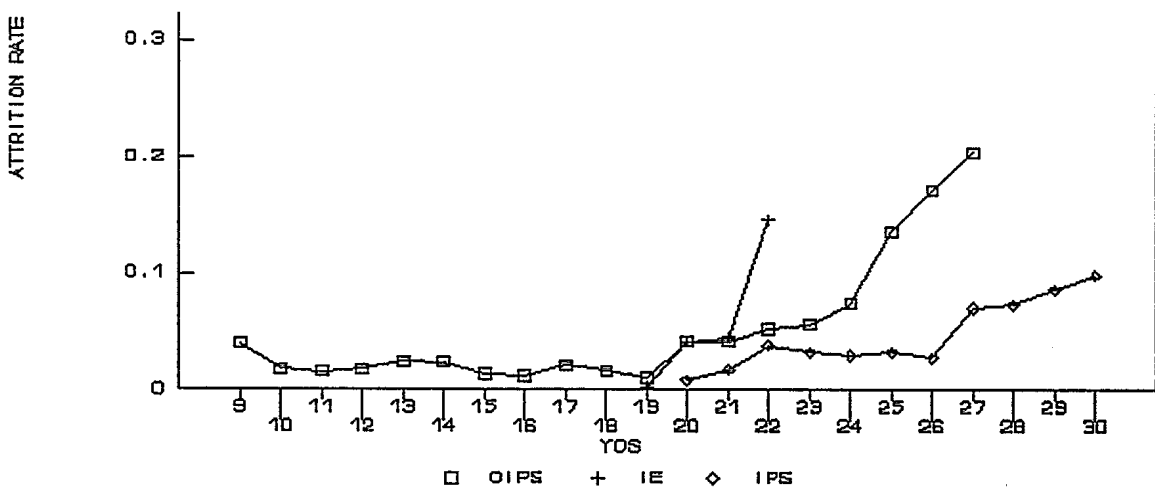


Figure 9: Enroled Since 1959 and Commissioned by 1968  
Comparing OIPS against IE and IPS in YOS

YOS and to 28 YOS. Converts to IPS experienced a slight increase in attrition between 20 and 22 YOS, while attrition between 23 and 26 YOS is low.

CASE 4 - OFFICERS WITH 17 TO 20 YOS IN 76

30. This group of officers make up the 1957 and 1958 cohorts, the group to whom IE/IPS offers were made to selected officers when the OCDP was introduced. These include Captains who were commissioned from the ranks (CFR), Majors (Maj) and Lieutenant Colonels (LCol). Figure 10 compares those that

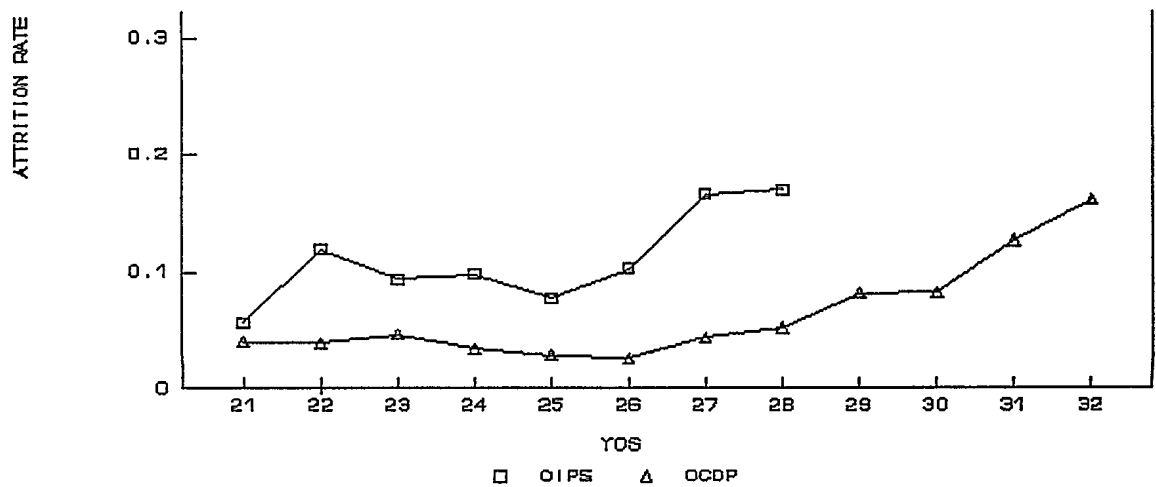


Figure 10: Officers Enroled in 1957 and 1958  
Comparing OIPS and OCDP/IPS

rejected the offer (plus those that were below rank for the offer) with those that accepted.

CASE 5 - OFFICERS WITH MORE THAN 20 YOS IN 76

31. Those officers who enroled prior to 1956 constitute the eight cohorts of 1949 to 1956. IPS offers were made to all LCol, Maj and CFR Captains within this group, and Figure 11 compares OIPS and OCDP attrition patterns.



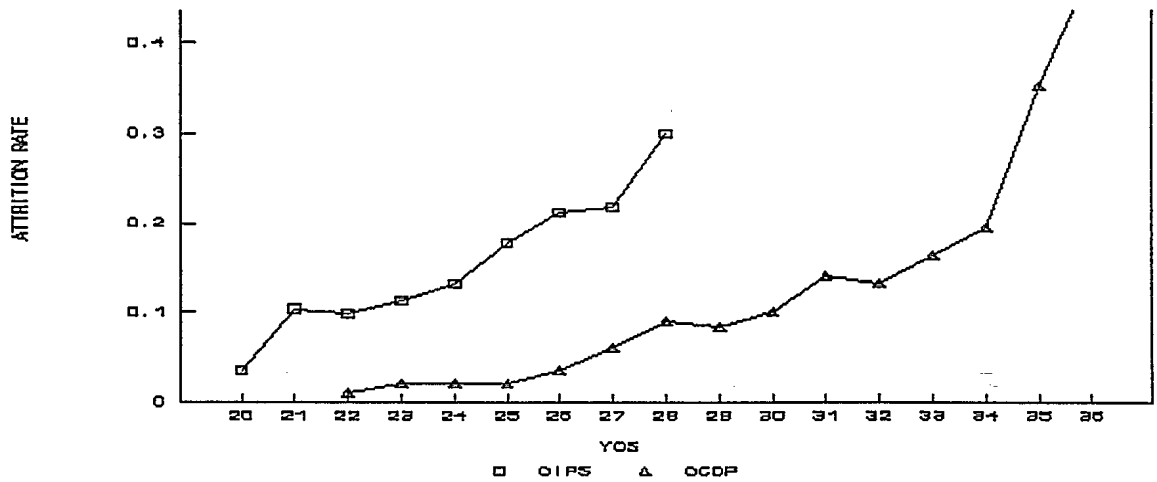


Figure 11: Officers Enroled from 1949 to 1956  
Comparing OIPS and OCDP in YOS

CASE 6 - OFFICERS ENROLED AFTER 76

32. Officers recruited after 76 were enroled directly on the OCDP terms of service, and data available covers 11-12 years. By comparing their attrition behaviour with that of those who converted to OCDP, an indication of behaviour patterns that could be expected is obtained. SE results are shown in YCS (Figure 12), separately from those cohorts on IE which are presented in YOS (Figure 13).

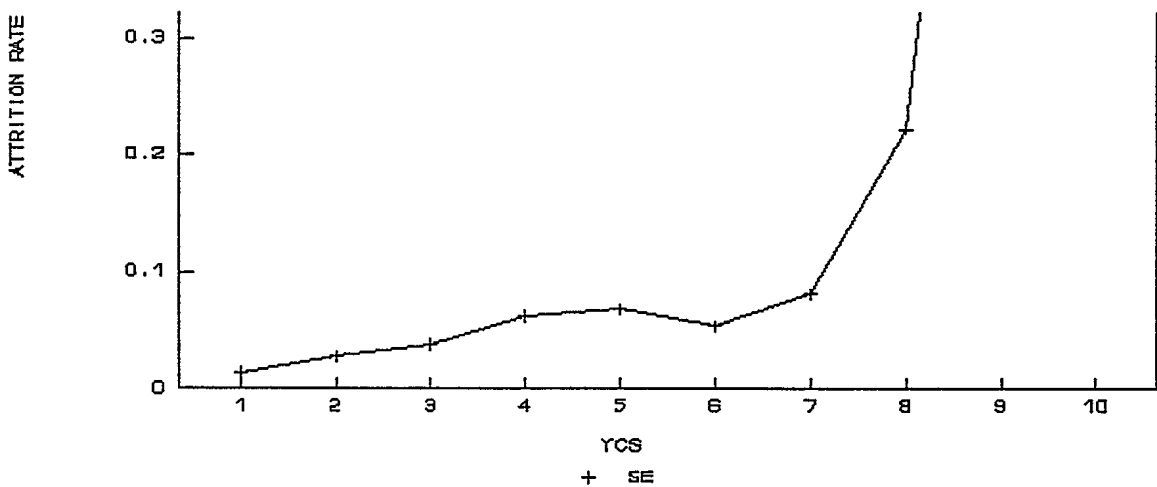


Figure 12: Officers Enroled Since 1976  
SE in YCS

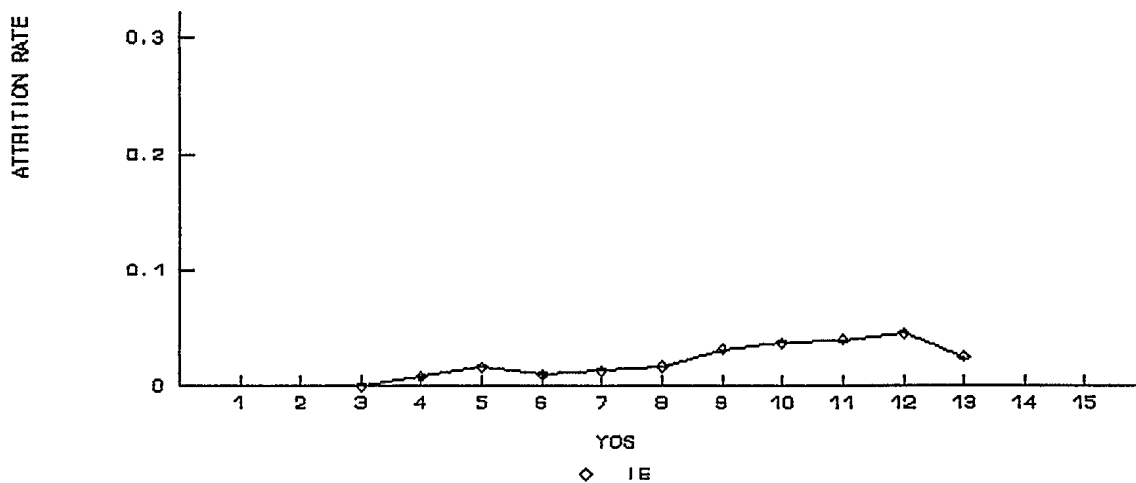


Figure 13: Officers Enroled Since 1976  
IE in YOS

33. The attrition rate for officers enroled under OCDP rises slightly for a short period after obligatory service in Figure 12, and IE attrition for officers enroled under OCDP is basically low throughout, with a slight increase in Figure 13 in the 9 to 12 YOS range.

DISCUSSION OF RESULTS

SE

34. The attrition results observed for those officers that converted to OCDP with 3 YCS or less indicates that the confusion surrounding the transition appeared to blur the benefit of converting to SE for those that intended to leave. The most surprising observations were that the highest attrition rates occurred from 4 to 6 YCS, well before mandatory departure at 9 YCS; and that there was a continuing tendency for officers to leave at 10 YOS. Similarities in the Figure 2 curves, coupled with releases at 9-10 YOS, suggest that the conversion choices were not clearly understood.

35. The tendency to leave by 10 YOS may imply that the 9 YCS gratuity regulations were not generally understood by officers accepting an SE; whereas older regulations governing return of pension contributions would have been well known by all officers. Under entry plans like the ROTP, officers are generally ending compulsory service near the 10 YOS point, by which time decisions had to be taken if there was any wish to withdraw pension contributions. The new OCDP policies, and the gratuity at 9 YCS, may have held unknown consequences on pension investment. The nuances could have been such that a desire to retain known entitlements may have continued to influence the attrition rate. The dramatic difference in behaviour of those on SE is shown in Figure 14, and underlines the confusion that occurred in 1976.

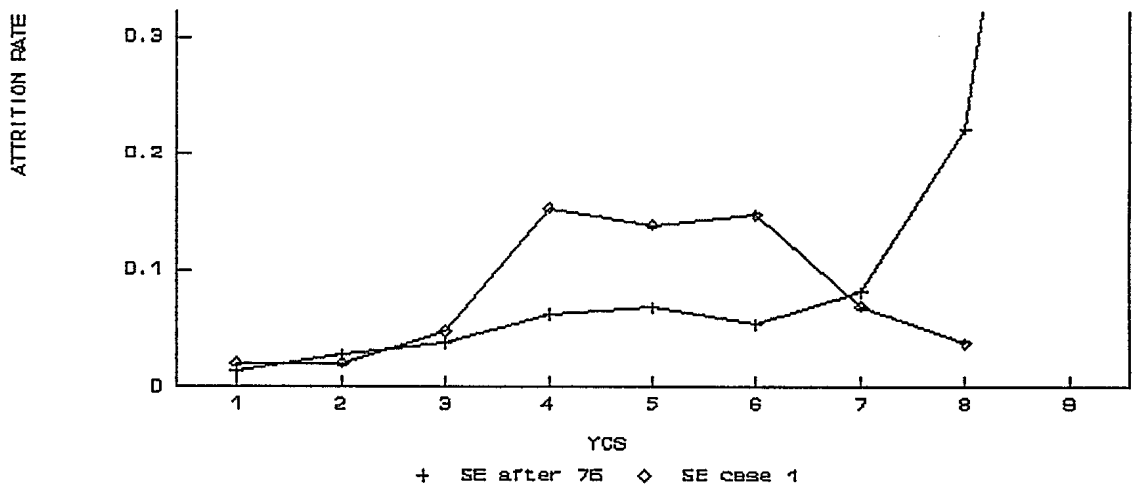


Figure 14: Comparing SE from Figures 3 and 12

36. It is necessary to examine the situation from a slightly different perspective to obtain a comparison of the attrition behaviour of officers entering the CF under the OIPS with those entering under OCDP. To get an estimate of early attrition behaviour under OIPS consider all Case 1 officers and note that the behaviour of those that converted to OCDP was similar to that of those who elected to remain on OIPS

(Figure 2). Both SE and IE must be included in the calculations to obtain the equivalent behaviour pattern under OCDP. The two curves, displayed in Figure 15, reveal that OIPS attrition at 4-5 YCS was delayed until the 8-11 YCS time period under OCDP. The proportion of officers remaining at the end of 11 YCS is marginally higher for individuals on

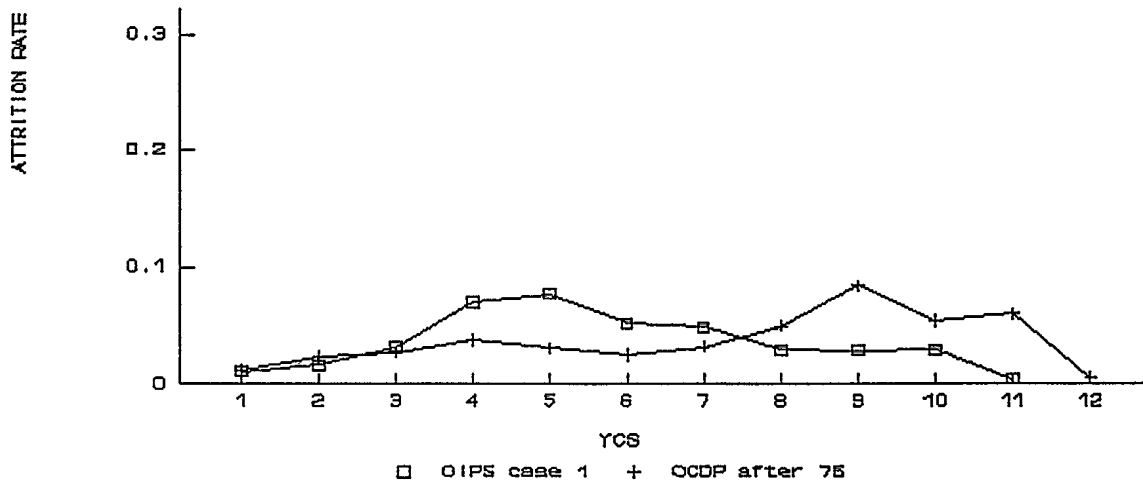


Figure 15: Comparison of OCDP for officers enrolled since 76 and OIPS from Figure 2

OCDP. The major observation that can be made in the comparison of OCDP and OIPS is that junior officers under OCDP tend to stay in a little longer but that the overall retention after 11 YOS is only marginally better.

IE

37. The IE offer normally follows promotion to Captain, a fact that motivates officers in the early part of the IE to remain in the CF. These officers experienced the lowest early attrition rate, and their rate remained low throughout, supporting the assumption that they accepted the IE for the option of remaining in the CF. In Figure 16 it is interesting that the attrition behaviour is independent of terms of service--almost the same for all officers.

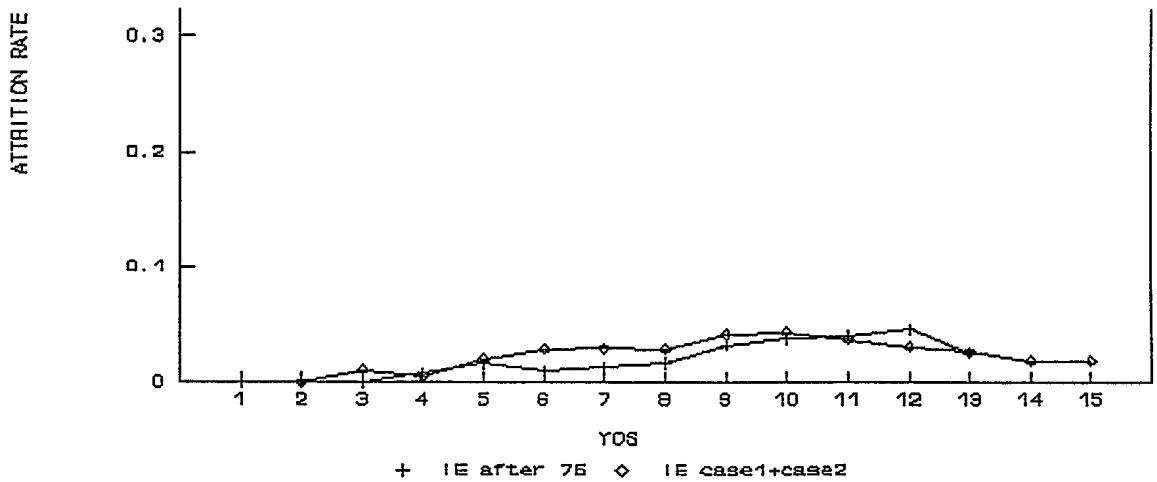


Figure 16: IE Comparison from Figures 5, 7 and 13

38. The only way to compare OIPS with IE beyond 13 YOS is to use data from officers that converted to IE (Figure 17). These curves follow each other closely from 10 to 19 YOS--the difference appears at the 20 YOS point. At this point the IE attrition rate becomes very high since it is the end of the contract. (IE data extends to 22 YOS because data on officers on a CE were included).

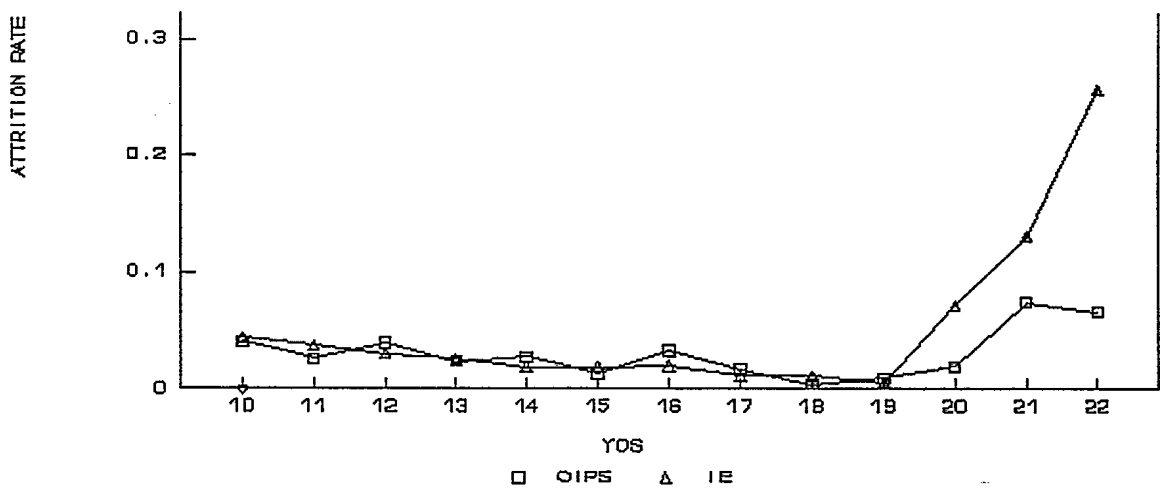


Figure 17: Indirect Comparison of OIPS Attrition with Attrition of OICDP Converts on IE

IPS

39. There is no one on IPS who was originally enrolled under OCDP, so a comparison with IPS converts is not yet possible. Accordingly the indirect comparison of attrition of IPS converts with OIPS officers (Cases 3, 4 and 5) yields Figure 18. Those who accepted IPS practically doubled their remaining eligibility for service, but left at a rate comparable to OIPS officers. Initial attrition on OCDP was much lower--mainly since eight years of pensionable service effectively increased the CF pension rate by 16 percent.

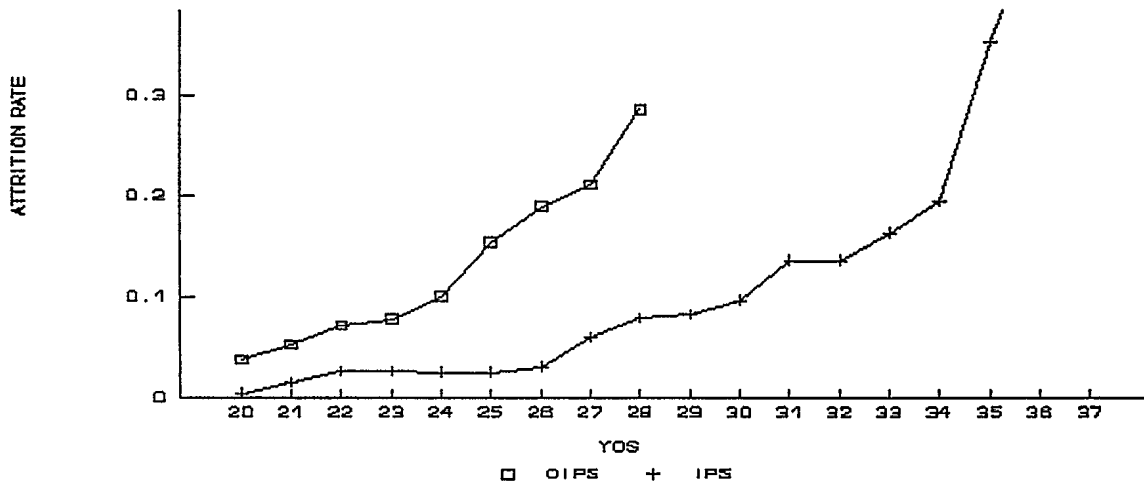


Figure 18: Comparison of OIPS Attrition with Attrition of IPS Converts

40. For those that converted to an IPS, the slight increase in attrition between 20 and 22 YOS indicates that OCDP regulations were becoming better known generally, and that officers recognized that the value of a 20 year earned pension was retained despite other penalties that might be imposed. The attrition between 23 and 26 YOS is low because of pension penalties imposed for leaving before the twenty-eighth year:

- a. from 20 to 24 YOS there is no gain on the guaranteed 20 year pension (40%);

- b. the 25 YOS pension is reduced 15 percent to the 42.5 percent level (from 50 percent);
- c. the 26 YOS pension is reduced 10 percent to the 46.8 percent level; and
- d. the 27 YOS pension is reduced 5 percent to the 51.3 percent level.

IPS attrition increases again beyond 35 YOS when pension is maximized and as the contract ends at age 55.

41. The attrition rate for officers under the OIPS starts to rise when they became eligible for an immediate pension at 20 YOS, and increases steadily as penalties decrease and as officers reach CRA. The sharp increase starting at 25 YOS corresponds to the CRA peaks at ages 45, 47 and 49-51 (45 was CRA for aircrew Captains, 47 was CRA for all other Captains and aircrew Majors). OIPS attrition peaks at 28 YOS, representing the maximum time one was allowed to serve under post-integration terms of service, and a period that overlaps with the CRAs of more senior officers still on single service terms. (Those that were in the most senior ranks who had a CRA of age 55 prior to OICDP were dropped because of limited numbers.)

#### OIPS

42. OICDP presented the opportunity to extend CF service and increase earned pension--particularly for those who were limited to 28 or 30 YOS, and for those whose CRA was lower than age 55. On the other hand, OIPS officers with CRA limits, but below rank or occupation eligibility limits for offer of OICDP/IPS, retained OIPS service rights that allowed them to achieve a better pension than OICDP/IE officers who had to leave at 20 YOS. Figure 19 clearly shows that ages 40 and 55 were the only ones with implications on OICDP attrition, and

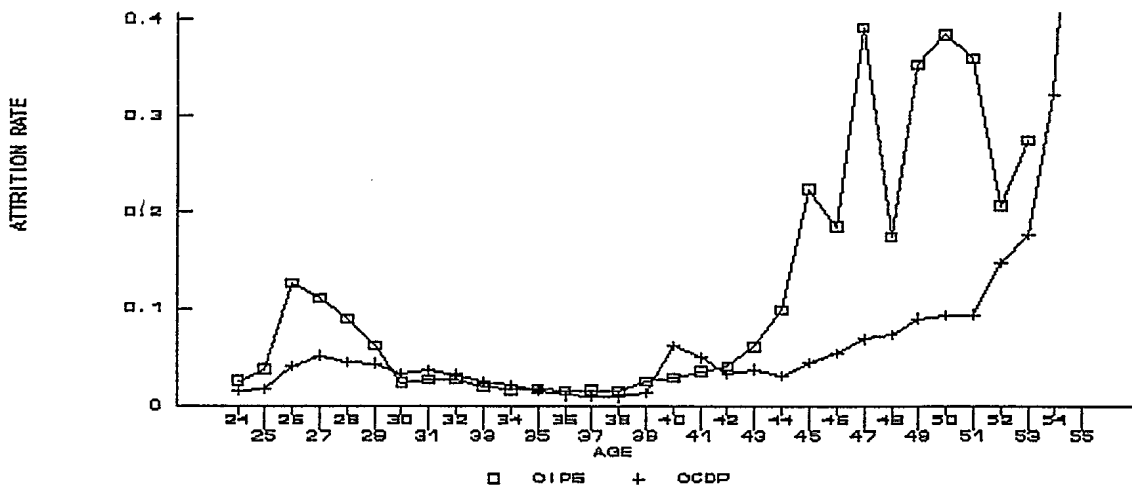


Figure 19: Comparison of OIPS Attrition with Attrition of IPS Converts by Age

age 40 is no longer a factor. (20 YOS will still occur in the age range of 37 to 45.)

43. The high attrition in the 26-28 age bracket corresponds to the completion of obligatory service.

**CONCLUSIONS**

44. The main effects of changing from OIPS to the OCDP system is that:

- a. the attrition in the early stages (4-6 YCS) is reduced, but nearly compensated by attrition in the 8-11 YCS period, that is, retention at 11 YCS is only marginally higher;
- b. there is a pronounced aging in the personnel inventory due to the extension of CRA to 55 under the OCDP/IPS; and

45. It is also concluded that:

- a. the 9 YCS point did not have an impact on the attrition rate for officers who converted to OCDP;



- b. the 9 YCS point has had some effect on the attrition rate for officers recruited under SE;
- c. the attrition on IE is similar for both convert and "pure OCDP" and is comparable to that of OIPS between 10 and 19 YOS --IE is offered early in an officer's career making it very similar to OIPS;
- d. attrition of officers on IPS rises once individuals reach 28 YOS and pensions are no longer subject to penalty;
- e. another phase of this study is required to investigate the effects OCDP on attrition within specific groups defined by entry plan or occupation.

## REFERENCES

1. DPCAO Memorandum with ANNEX dated 22 April 91.
2. CONNOR C.G., Two methods to graphically compare OCDP and non-OCDP attrition, D Man A Staff Note 8/84, December 84.
3. KEAST Liam, The development of a cohort analysis reporting system, D Man A Staff Note 4/91, August 91.

**Canada**

#508655