

ANALYSIS OF PCC EXAMS

Class of 2009 June

.....A Prime Academy
Research Report



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Source:

This document is based on sample data accessed from ICAI's website. The ICAI is in no way part of this analysis.

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How did “Class of 2009J (CA PCC)” Fare

The results of the CA Level 2 (a.k.a PCC) exam held in June 09 have been announced. These have brought cheers to some and heartburn to others. It is imperative to know how the class performed. This Analysis is intended to provide answers to a few pointed questions. Like:

- what the pass percentages were;
- how many failed courtesy “aggregate”,
- what was the quality of the candidates explained in terms of the marks scored;
- where did the candidates fail;
- did they fail marginally or spectacularly;
- which were the success subjects

Sample size

Incidentally, even if the number of candidates rose significantly the sample size wouldn't be altered by any meaningful number.

How did we do the Analysis?

Our ball-park estimate is that about 64,000 candidates took the examination. There was little meaning in tapping data for the entire “population”. Applying the principles of sampling and drawing inputs from the software that we use, we found that for a 4% error estimate and a 99% confidence level the sample size should be 1023. (Incidentally, even if the number of candidates rose significantly the sample size wouldn't be altered by any meaningful number). For simplicity we rounded off the number to 1,000.

We then used the random number table generated by the software that we employ to decide on the candidates whose marks we would tap. Interestingly, 60 of the numbers selected did not appear in the ICAI exam result list. This could perhaps mean that 6% of the candidates did not elect to take the exams that they were supposed to take. We substituted

Random Sampling

“4% error estimate and 99% confidence level” means that if the check is repeated, then 99 out of 100 times the results would be this way or that by a maximum of 4% in relation to the results that we get out of using this sample.

this with a fresh set of 60 numbers, again using the Random Number Table generator.

What are the Findings?

We break the findings into 5 parts

PART 1: Passes-Good and Not Good

The first critical number is the pass percentage. It is easy to define “pass percent” of candidates who took both Groups; divide the passes in “Both groups” by the number of enrolments in “Both groups”. When it comes to “pass percent” of a Group things can be tricky. We have looked at Group pass percent in two ways. One was the pass percent of those who take “one Group” only. The second was the pass percent of those who “Appeared in the Group” a k a composite results.

Table 1: Pass Percentage

Appeared	Students	Pass	Percent
Group 1 and passed Group 1	109	40	36.7%
Group 2 and passed Group 2	149	20	13.4%
Both Groups	742		
Passed Group 1 only		176	23.7%
Passed Group 2 only		3	0.4%
Passed Both Groups		95	12.8%
Total	1,000	334	33.4%
Composite Result			
Group 1*	851	311	36.5%
Group 2*	891	118	13.2%
Total	1,742	429	24.6%

* Including those who wrote both groups

“Took Group 1 only” would mean that the candidate wrote that Group only and did not take the other group. “Took Group 2 only” would mean that the candidate wrote that Group only and did not take the other group.

“Appeared in Group 1” (a k a composite result) would include those who took both groups. “Appeared in Group 2” (a k a composite result) would include those who took both groups. Ditto when it comes to number of people who passed that group.

For example, if 100 candidates took Group 1 only, 150 took Group 2 only and 75 took both groups, the number of candidates who “Appeared in Group 1” would be $100 + 75 = 175$ while the number who “Appeared in Group 2” would be $150 + 75 = 225$. And if 30 passed Group 1 only, 20 passed Group 2 only and 15 passed both Groups, the number passing Group 1 would be $30 + 15 = 45$, the number passing Group 2 would be $20 + 15 = 35$.

This we believe is the appropriate way of assessing pass percent of a Group.

A few quick conclusions follow from Table 1:

- Of the 1000 candidates in the sample, 334 passed one group or other. They had, in other words, good cause for celebration. One interpretation hence is that the overall success rate is 33.4%.
- The composite result is 24.6%. To understand this we need to understand the number 1,742 in our table. If a candidate took both groups he is counted as 2 candidates. From that stand point there are 1,742 candidates. If a candidate passes both groups, it's counted as 2 passes. This gives a result of 24.6% which is a second indicator of the success rate.
- Considering the fact that these results are fairly close to that announced by ICAI, we believe that our sample is reliable.

ICAI's Announcement

Group	% of pass
Both Groups	14.3
Group - 1	38.3
Group - 2	14.7

- At 36.5%, the Composite Group 1 result (including those who wrote both groups) is good while at 13.2%, the Composite Group 2 result is downright bad.

PART 2: Success delayed, not denied?

Table 2: Outcome Percentage

Failed In	GROUP 1		GROUP 2	
	Total	%	Total	%
One subject	190	22.3%	146	16.4%
Two subjects	158	18.6%	238	26.7%
Three subjects	102	12.0%	360	40.4%
Aggregate	90	10.6%	29	3.3%
Passed	311	36.5%	118	13.2%
TOTAL	851	100%	891	100%

Why did a candidate fail the exam? Was it because he failed in a subject or was it because he failed to crack the “aggregate” code? The “aggregate” clause has historically drawn a lot of flak amongst people; not just amongst the student community but amongst the academia as well. This clause requires that a candidate get 40 in each subject and 50 overall to clear the examination. Whether the clause relating is “aggregate” is good or bad has always been a subject of argument failures.

Table 3:

% of Failure	GROUP 1		GROUP 2	
	Failed in	Failed	Percent	Failed
One subject	190	35.2%	146	18.9%
Two subjects	158	29.2%	238	30.8%
Three subjects	102	18.9%	360	46.6%
Aggregate	90	16.6%	29	3.7%
TOTAL	540	100.0%	773	100.0%

Arguments notwithstanding, a look at how many didn't win because they didn't win in a subject or because they didn't cross the aggregate is worth looking.

Here are a few observations from Tables 2 and 3.

- In Group 1, 16.6% of the total candidates who failed, failed because they did not get the overall total of 150 in that Group. In other words they got their 40 in each subject but not the total of 150. In Group 2, 3.7% of the total candidates who failed, failed because they did not get a total 150 in that Group. We believe that while the Group 1 percentage is significant, that in Group 2 is miniscule to warrant any concern over the aggregate clause.
- The extent of failure in Group 2 is a lot more alarming than that in Group 1 with more than 77% of the failed students failing in two or more subjects. The corresponding number in Group 1 is 48%. Equally alarming is the fact that those failing in all three papers in Group 2 is a very high 47%.

PART 3: The Marks Story

To understand the quality of performance it is instructive to look at the class interval of marks. The range of marks scored in each subject is captured in Table 4. This narrates a very revealing story.

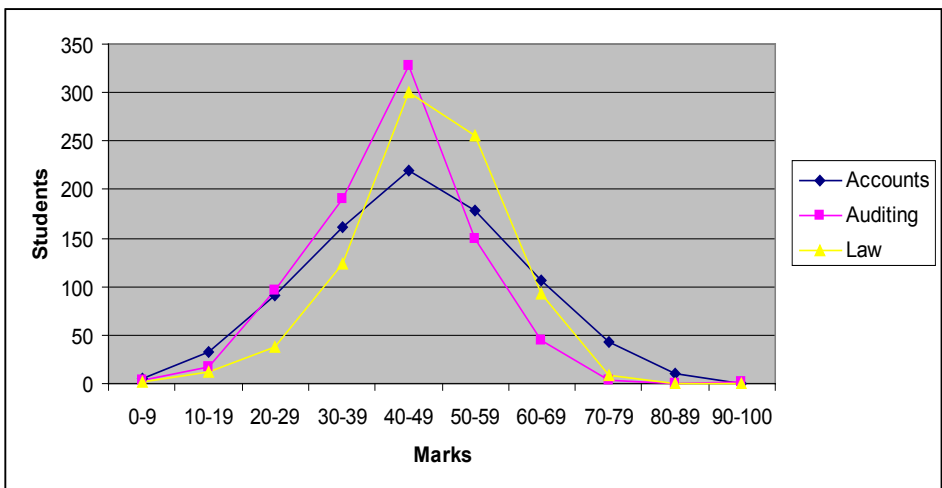
A Moral or two...

51 of the 742 candidates or 7% of candidates who wrote both Groups passed courtesy the provision of set off. That is, they did not have the aggregate of 150 in a Group but still cleared it because of the surplus that they carried forward from the other Group. Incidentally since 95 candidates pass both groups, this 51 represents an unbelievably high 54% of the total passes. Moral: Take both groups at the same time.

Table 4: Range of Marks

		GROUP 1			GROUP 2		
Range	ACCTS	AUDIT	LAW	CAFM	TAX	INFO	
0-9	6	4	1	80	15	7	
10-19	32	18	12	153	77	63	
20-29	91	96	38	217	180	148	
30-39	161	190	124	197	241	280	
40-49	219	328	300	152	239	241	
50-59	179	150	255	73	97	107	
60-69	107	45	92	13	26	20	
70-79	43	3	9	0	2	1	
80-89	10	0	0	0	0	0	
90-99	0	1	0	0	0	0	
Absentees	3	16	20	6	14	24	
Total	851	851	851	891	891	891	

Barring Accounts, there were no significant seventies. Statistically speaking, the performance in Accounts and Law resembles a neat normal distribution curve. The curve for law is slightly skewed. In Group 2, the curve for CAFM is heavily slanted to the left indicating the relative poor performance of the student in the subject. By and large, the CA population seem to be a homogenous group when it comes to performance.



The performance in terms of pass percent in each of the 3 subjects in Group 1 is well above 60% with that in Law being a high 77%. Subject wise performance in Group 2 has been awful with the pass percent in CAFM being under 27% and that in the other two subjects a shade above 40%. Accounts has been the scoring-subject (score of over 60) with about 19% of the candidates achieving that.

Pass Percentage and Scoring Rate

Table 5: Group 1

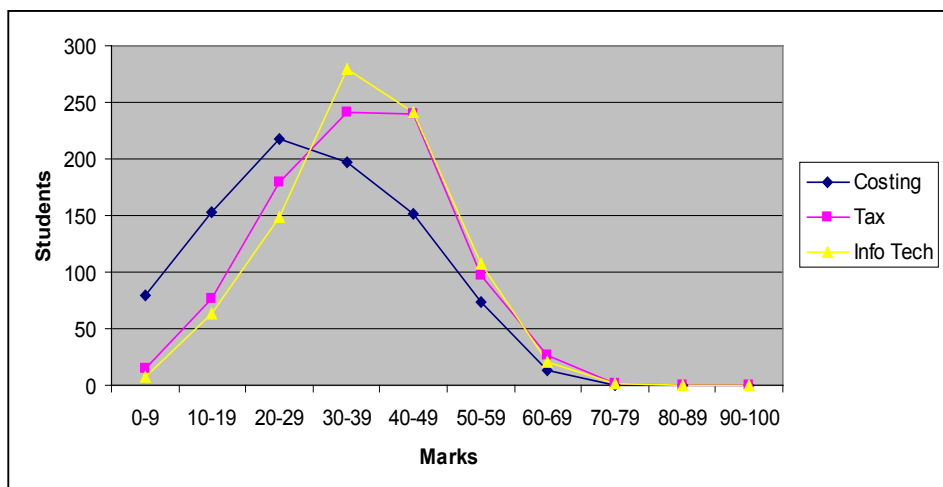
Subject	Accounts	Auditing	Law
Pass percent	65.6%	61.9%	77.1%
Above 60%	18.8%	5.8%	11.9%

Table 6: Group 2

Subject	Cost	Tax	InfoTech
Pass percent	26.7%	40.9%	41.1%
Above 60%	1.5%	3.1%	2.4%

A slew of numbers in respect of each subject is computed (Table 7) to understand the quality of performance.

- The mean or the average marks gives a general idea of the performance of the student. The best average is Law (47%) followed by Accounts (46%) and Audit (42%). It's 36% in Tax, 35% and a very poor 29% in CAFM. No subject has an average mark of 50%. Doesn't give scope for much joy.
- The average marks can be misleading. It can hide the overall performance on account of extremes at either end; big daddies and



poor performers. The median mark is far more interesting because it tells you the mark which 50% of the candidates crossed. Very significantly, there is hardly any difference subject wise in the mean and the mode, indicating that the performance of the class was generally uniform. The CA collegium is homogeneous.

- A candidate has scored 94 in Auditing. That's some score indeed. Another candidate has an 88 in Accounts.
- There have been zeroes scored in some subjects. Sad but true.
- It can be disappointing to get 39 in a subject. 29 candidates got that in Audit and in Infotech; in Accounts the number was 18, in Tax it was 14, in Law 13 and in CAFM 7. It is another matter that none of these candidates did really well in other subjects to generate a sympathy factor.

Table 7: High, Med, Low:

	Mean	High	Low	Med	Mode	Subject 39
Accounts	46	88	0	46	43	18
Audit	42	94	0	43	43	29
Law	47	76	8	48	47	13
Total Group 1	133	221		136	150	NA
Cost	29.	69	0	29	40	7
Tax	35	72	0	36	40	14
Info Tech	36	70	3	37	40	29
Total Group 2	100	192		102	112	NA

PART 4: Super Sixty

Sixty is considered to be an important number in professional examinations. So a look at how many got 60 in one subject, in two subjects etc can be instructive.

A quick glean from the sixty club (Table 8) reveals:

- Only a handful of students have managed to score past 60 in three subjects in Group 1. No candidate achieved this feat in Group 2.

- A fairly large number of students have scored more than 60 in one subject in Group 1. The number so managing in Group 2 is significantly less.

Table 8: 60 counts

60s	Composite Group 1	Composite Group 2
None	612	835
In One sub	180	50
In Two Subs	47	6
In Three Subs	12	0
Total	851	891

PART 5: The non-serious player

Drop Outs: There is the propensity amongst students to apply for the exams, pay the fees for it, receive the hall ticket and then not take the exams for a variety of reasons. While we have not taken these numbers in the computation of pass percents it would be instructive to find the dropout percents. Our definition of a drop out would be someone who has not turned up for all the subjects of the Group.

No student is marked as absent in all the three subjects of the group. The fact that some numbers in the sequence are missing could mean that these numbers are withdrawn possibly because the candidates did not take up the exam. As indicated earlier this is 6%. The drop out is likely to be 6%.

Half way drop outs: There is also a propensity amongst candidates to take a paper or two in a group and then drop out either because they had done the paper poorly or in their judgment their performance was sub-par and that they felt that they had no prospects of clearing the group. There would of-course be the legitimate reason of falling sick. Whether the sickness was because of lack of performance or otherwise is debatable.

The Merit List

Our sample threw up 2 rank-holders from out of the sample of 1,000.

Computing the proportion of such dropouts gives one an indication of non-serious candidates or candidates lacking in self-confidence. As Table 9 shows this is not significant.

Table 9: Half way drop outs

Half way drop outs	Group 1	Group 2
Appeared	851	891
<hr/>		
Wrote and Dropped Out		
After 1 paper	13	12
After 2 papers	5	7

Non-serious: Anyone who applies for but doesn't take the exam in part and anyone who gets less than 20 marks in a subject is in our definition a Non-serious player. In Group 1 the percent is 4.4% and in Group 2 it's an alarming 16.4%.

IN RETROSPECT

Here is a summary of the research

- The sample is very representative given that the pass percent findings are pretty close to those announced by the ICAI.
- The composite pass rate is 25% and the success rate is 33%.
- The results are handsome in Group 1, but the performance in Group 2 is extremely poor.
- The cause for failure is not the inability to get an aggregate but the inability to score 40 in each subject. CAFM has been the principal bugbear.
- The pass percentage in each subject is high in Group 1 but very low in Group 2
- People scoring more than 60 in 2 subjects appears to be the exception
- Non-serious candidates, is significant in Group 2.
- The CA student population is a homogenous group falling broadly in a normal distribution pattern with uniform mean and mode!