

**National University of
Science and Technology**
Think in Other Terms



**FACULTY OF COMMERCE
DEPARTMENT OF FINANCE
BACHELOR OF COMMERCE HONOURS DEGREE IN FINANCE
AND
IN FISCAL STUDIES
PART II 2nd SEMESTER FINAL EXAMINATION– MAY 2012
RESEARCH METHODS IN FINANCE AND ECONOMICS [CFI 2205]
TIME ALLOWED: 3 HOURS**

INSTRUCTIONS

1. Answer any **FOUR (4)** questions.
2. Start the answer to each full question on a fresh page of the answer sheet.
3. All rough work must be crossed out and attached at the end of the answer booklet.
4. Read questions carefully and address all parts of the question.
5. Questions may be written in any order, but must be legibly numbered.

INFORMATION FOR CANDIDATES

1. The paper contains SIX (6) questions.
2. This paper consists of five (5) printed pages
3. Marks for each part question or full question are shown in parentheses brackets () and square brackets [] at the end of each part question or full question respectively.
4. All questions carry equal marks [25 marks].

QUESTION ONE

- a) Distinguish between applied and basic research **(2 marks)**
- b) “Every research is about developing a knowledge base in our area of interest”. Explain in detail, how this objective can be achieved through the following two components of a research study:
- (i) Literature review and its theoretical frameworks **(13 marks)**
 - (ii) Methodology and its analytical framework **(10 marks)**
- TOTAL [25 MARKS]**

QUESTION TWO

Suppose that a researcher is doing a study of the effects of the level of service provision on customers of financial institutions in Zimbabwe by collecting and analyzing data from employees and customers of particular institutions. The researcher came up with one specific objective which reads:

To analyze the extent to which the level of service delivery of a financial institution influence customer satisfaction.

- a) Identify the dependent and independent variables in this objective of the study. **(2 marks)**
- b) State two sub-variables that the researcher can use to measure each of the two properties being studied.
- (i) two for service delivery, and **(3 marks)**
 - (ii) two for customer satisfaction **(3 marks)**
- c) Explain how one would operationalize each of the sub-variables you have selected in (b) above. **(8 marks)**
- d) Explain one method the researcher would logically use to sample from each of the following main population groups of the study. Justify your choices.
- (i) management members of institutions **(3 marks)**
 - (ii) employees of institutions responsible for providing service **(3 marks)**
 - (iii) customers who receive the service **(3 marks)**
- TOTAL [25 MARKS]**

QUESTION THREE

- a) Discuss how research strategies or approaches such as qualitative and quantitative may influence the choice of techniques for data collection. **(5 marks)**
- b) Explain the following research designs and give examples of situations where they may be applied when conducting a research study.
- (i) Exploratory design **(4 marks)**
 - (ii) Descriptive design **(4 marks)**
 - (iii) Explanatory design **(4 marks)**
 - (iv) Case study design **(4 marks)**
 - (v) Hypothesis testing design **(4 marks)**
- TOTAL [25 MARKS]**

QUESTION FOUR

- a) Distinguish between a population and a sample **(2 mark)**
- b) Explain how a sample should be related to the target population **(2 mark)**
- c) Define and give original examples of the following sampling methods:
- (i) simple random sampling **(3 marks)**
 - (ii) systematic sampling **(3 marks)**
 - (iii) stratified random sampling **(3 marks)**
 - (iv) cluster sampling **(3 marks)**
 - (v) snowball sampling **(3 marks)**
- d) Explain how each of the following research errors may affect the validity of the study
- (i) sampling error **(2 marks)**
 - (ii) data collection error **(2 marks)**
 - (iii) data analysis error **(2 marks)**
- TOTAL [25 MARKS]**

QUESTION FIVE

The average salary for the population of senior managers of financial institutions for a specific year was reported to be \$50,000. A random sample of 36 management executives in a particular state had a mean of \$50,600 and a standard deviation of \$30,000. Given that this information is used by the labour body to deal with complaints from the industry stakeholders, address the following questions:

- a) State the null and alternative hypothesis using a two-tailed test. **(2 marks)**
- b) Set the decision rules suitable for this hypothesis analysis test. **(4 marks)**

- c) Use a normal distribution curve to plot both the calculated and critical values of this study and interpret your findings to the labour body. **(15 marks)**
- d) Demonstrate if there is sufficient statistical evidence at the 0.05 level of significance to conclude that the mean salary differs from \$50,000. **(4 marks)**

TOTAL [25 MARKS]

QUESTION SIX

- a) State any two conditions that the data should satisfy before the researcher can attempt to use regression analysis. **(2 marks)**
- b) A financial institution had over 1,000 of its long-term commercial loans secured by real property assets across the whole country which had not been revalued for over ten years. It intends to assess the current adequacy of these properties by estimating their current values using regression. The following data were drawn from a sample of representative 10 properties.

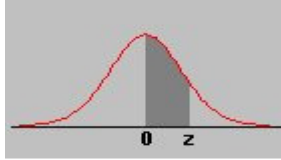
| Item | Institution's valuations('000') | Property market values('000') |
|------|---------------------------------|-------------------------------|
| 1 | 22 | 235 |
| 2 | 15 | 145 |
| 3 | 8 | 75 |
| 4 | 14 | 150 |
| 5 | 25 | 265 |
| 6 | 46 | 420 |
| 7 | 54 | 560 |
| 8 | 60 | 715 |
| 9 | 12 | 115 |
| 10 | 44 | 395 |

- (i) Show how a condition of linearity is satisfied in this case **(8 marks)**
- (ii) Determine the equation for the regression line based on the data above **(10 marks)**
- (iii) What condition applies for the use of the equation derived in (ii) above **(2 marks)**
- (iv) Illustrate how the institution will use regression to estimate market values of properties with an example of one property whose value is \$38,000 in the institution's valuation list. **(3 marks)**

TOTAL [25 MARKS]

END OF EXAMINATION PAPER

Normal Distribution Table: Z Area between 0 and z



| Z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0 | 0.0000 | 0.0040 | 0.0080 | 0.0120 | 0.0160 | 0.0199 | 0.0239 | 0.0279 | 0.0319 | 0.0359 |
| 0.1 | 0.0398 | 0.0438 | 0.0478 | 0.0517 | 0.0557 | 0.0596 | 0.0636 | 0.0675 | 0.0714 | 0.0753 |
| 0.2 | 0.0793 | 0.0832 | 0.0871 | 0.0910 | 0.0948 | 0.0987 | 0.1026 | 0.1064 | 0.1103 | 0.1141 |
| 0.3 | 0.1179 | 0.1217 | 0.1255 | 0.1293 | 0.1331 | 0.1368 | 0.1406 | 0.1443 | 0.1480 | 0.1517 |
| 0.4 | 0.1554 | 0.1591 | 0.1628 | 0.1664 | 0.1700 | 0.1736 | 0.1772 | 0.1808 | 0.1844 | 0.1879 |
| 0.5 | 0.1915 | 0.1950 | 0.1985 | 0.2019 | 0.2054 | 0.2088 | 0.2123 | 0.2157 | 0.2190 | 0.2224 |
| 0.6 | 0.2257 | 0.2291 | 0.2324 | 0.2357 | 0.2389 | 0.2422 | 0.2454 | 0.2486 | 0.2517 | 0.2549 |
| 0.7 | 0.2580 | 0.2611 | 0.2642 | 0.2673 | 0.2704 | 0.2734 | 0.2764 | 0.2794 | 0.2823 | 0.2852 |
| 0.8 | 0.2881 | 0.2910 | 0.2939 | 0.2967 | 0.2995 | 0.3023 | 0.3051 | 0.3078 | 0.3106 | 0.3133 |
| 0.9 | 0.3159 | 0.3186 | 0.3212 | 0.3238 | 0.3264 | 0.3289 | 0.3315 | 0.3340 | 0.3365 | 0.3389 |
| 1.0 | 0.3413 | 0.3438 | 0.3461 | 0.3485 | 0.3508 | 0.3531 | 0.3554 | 0.3577 | 0.3599 | 0.3621 |
| 1.1 | 0.3643 | 0.3665 | 0.3686 | 0.3708 | 0.3729 | 0.3749 | 0.3770 | 0.3790 | 0.3810 | 0.3830 |
| 1.2 | 0.3849 | 0.3869 | 0.3888 | 0.3907 | 0.3925 | 0.3944 | 0.3962 | 0.3980 | 0.3997 | 0.4015 |
| 1.3 | 0.4032 | 0.4049 | 0.4066 | 0.4082 | 0.4099 | 0.4115 | 0.4131 | 0.4147 | 0.4162 | 0.4177 |
| 1.4 | 0.4192 | 0.4207 | 0.4222 | 0.4236 | 0.4251 | 0.4265 | 0.4279 | 0.4292 | 0.4306 | 0.4319 |
| 1.5 | 0.4332 | 0.4345 | 0.4357 | 0.4370 | 0.4382 | 0.4394 | 0.4406 | 0.4418 | 0.4429 | 0.4441 |
| 1.6 | 0.4452 | 0.4463 | 0.4474 | 0.4484 | 0.4495 | 0.4505 | 0.4515 | 0.4525 | 0.4535 | 0.4545 |
| 1.7 | 0.4554 | 0.4564 | 0.4573 | 0.4582 | 0.4591 | 0.4599 | 0.4608 | 0.4616 | 0.4625 | 0.4633 |
| 1.8 | 0.4641 | 0.4649 | 0.4656 | 0.4664 | 0.4671 | 0.4678 | 0.4686 | 0.4693 | 0.4699 | 0.4706 |
| 1.9 | 0.4713 | 0.4719 | 0.4726 | 0.4732 | 0.4738 | 0.4744 | 0.4750 | 0.4756 | 0.4761 | 0.4767 |
| 2.0 | 0.4772 | 0.4778 | 0.4783 | 0.4788 | 0.4793 | 0.4798 | 0.4803 | 0.4808 | 0.4812 | 0.4817 |
| 2.1 | 0.4821 | 0.4826 | 0.4830 | 0.4834 | 0.4838 | 0.4842 | 0.4846 | 0.4850 | 0.4854 | 0.4857 |
| 2.2 | 0.4861 | 0.4864 | 0.4868 | 0.4871 | 0.4875 | 0.4878 | 0.4881 | 0.4884 | 0.4887 | 0.4890 |
| 2.3 | 0.4893 | 0.4896 | 0.4898 | 0.4901 | 0.4904 | 0.4906 | 0.4909 | 0.4911 | 0.4913 | 0.4916 |
| 2.4 | 0.4918 | 0.4920 | 0.4922 | 0.4925 | 0.4927 | 0.4929 | 0.4931 | 0.4932 | 0.4934 | 0.4936 |
| 2.5 | 0.4938 | 0.4940 | 0.4941 | 0.4943 | 0.4945 | 0.4946 | 0.4948 | 0.4949 | 0.4951 | 0.4952 |
| 2.6 | 0.4953 | 0.4955 | 0.4956 | 0.4957 | 0.4959 | 0.4960 | 0.4961 | 0.4962 | 0.4963 | 0.4964 |
| 2.7 | 0.4965 | 0.4966 | 0.4967 | 0.4968 | 0.4969 | 0.4970 | 0.4971 | 0.4972 | 0.4973 | 0.4974 |
| 2.8 | 0.4974 | 0.4975 | 0.4976 | 0.4977 | 0.4977 | 0.4978 | 0.4979 | 0.4979 | 0.4980 | 0.4981 |
| 2.9 | 0.4981 | 0.4982 | 0.4982 | 0.4983 | 0.4984 | 0.4984 | 0.4985 | 0.4985 | 0.4986 | 0.4986 |
| 3.0 | 0.4987 | 0.4987 | 0.4987 | 0.4988 | 0.4988 | 0.4989 | 0.4989 | 0.4989 | 0.4990 | 0.4990 |