



De La Salle University – Dasmariñas

**WAGE GAPS IN AGRICULTURE, MANUFACTURING,
AND SERVICES SECTORS IN THE PHILIPPINES**

A Thesis
Presented to the Faculty of the
Allied Business Department
De La Salle University-Dasmariñas
Dasmariñas City, Cavite

In Partial Fulfillment
of the Requirements for the Degree of
Bachelor of Science in Business Administration
Major in Economics

PIERE CANDICE V. NAVARRETE

April 2013



ABSTRACT

NAVARRETE, P. C. V., Wage Gaps in Agriculture, Manufacturing, and Services Sectors in the Philippines. Bachelor of Science in Business Administration Major in Economics, De La Salle University-Dasmariñas, Dasmariñas City, April 2013. Adviser: Dr. Willington O. Onuh.

Wage gaps had increased substantially in the Philippines. Despite researches dating back two decades, empirical evidence remains mixed as to the degree of wage gap between sectors and within sectors. The study aimed to explore if there is such an existing wage gaps within and between the three economic sectors in the Philippines by gender and education. This study was conducted: (a) To assess the composition of workers in agriculture, manufacturing, and services sector by gender and education; (b) describe the distribution and variation of daily wage across workers in the three sectors; (c) examine the wage gap of different groups of workers within the three sectors by education and gender; (d) calculate the wage gap of different groups of workers between agriculture and manufacturing, manufacturing and services, and agriculture and services by education and gender; and (e) measure the wage gaps among groups of workers within and between the sectors.

The October 2011 Labor Force Survey (LFS) was used in estimating the daily wages of workers in agriculture, manufacturing, and services sectors by gender and education. Descriptive statistics were used measure mean wages, standard deviations and coefficients of variation; quantile regression was employed



in comparing and estimating certain wage gaps within and between the sectors. Quantile regression allowed for a better understanding of wage gaps along the wage distribution of workers in the agriculture, manufacturing, and services sectors.

The results were found to be consistent with the dominant views of literatures. That is, wage gaps exist within and between all three sectors with gender and education levels. In the gender category, results showed that males were earning relatively higher wages compared to their female counterparts. By education, workers who took college education earned relatively higher wages compared to the ones who finished high school and elementary education. The results of the data within and between the sectors have furthermore shown that, generally, services sector is the highest wage earner by gender and of education, followed by the manufacturing sector, while the agriculture sector earned the lowest wage.

Generally, the findings suggest that support for antidiscrimination especially for female workers in the lower quantiles of the wage distribution as well as government's support for education may narrow certain wage gaps between genders and educational levels.



TABLE OF CONTENTS

	Page
TITLE PAGE.....	i
APPROVAL SHEET.....	ii
BIOGRAPHICAL SKETCH.....	iii
ACKNOWLEDGEMENT.....	iv
ABSTRACT.....	v
TABLE OF CONTENTS.....	vii
LIST OF TABLES.....	x
LIST OF FIGURES.....	xvii
LIST OF APPENDIXES.....	xviii
INTRODUCTION	1
Background of the Study.....	1
Statement of the Problem.....	4
Objectives of the Study.....	5
Hypotheses of the Study.....	6
Significance of the Study	6
Scope and Limitations of the Study.....	7
Definition of Terms.....	8
REVIEW OF RELATED LITERATURE.....	10
Wage Gaps in the Manufacturing Sector.....	11
Wage Gaps in the Services Sector.....	17



Wage Gaps in the Agriculture Sector.....	18
Sources of Wage Gaps.....	20
Studies on Quantile Regression.....	26
FRAMEWORKS OF THE STUDY	28
Theoretical Framework	28
Conceptual Framework.....	29
METHODOLOGY.....	32
Research Design.....	32
Sources of Data.....	32
Methods of Analysis.....	32
RESULTS AND DISCUSSION.....	35
Composition of Workers in Agriculture, Manufacturing, And Services Sectors	35
Distribution and Variation of Daily Wages Across Workers in The Three Sectors.....	37
The Distribution and Variation of Daily Wages of Workers Between the Three Sectors.....	52
Wage Gaps by Gender and Education	76
Wage Gaps among Workers Within and Between Agriculture, Manufacturing, and Services Sectors.....	80
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.....	116
Summary.....	116
Conclusions.....	120



Recommendations.....	121
REFERENCES.....	123
APPENDIXES.....	127





LIST OF TABLES

Table		Page
1	Total Number of Workers in Agriculture, Manufacturing and Services Sectors, Philippines, 2011.....	36
2	Total Number of Male and Female in Agriculture, Manufacturing and Services Sectors, Philippines, 2011.....	36
3	Total Number of Workers by Educational Attainment In Agriculture, Manufacturing and Services Sectors, Philippines, 2011.....	37
4	Wage Gaps by Gender in Agriculture Sector, Philippines, 2011.....	38
5	Wage Gaps by Elementary and High School Education in Agriculture Sector, Philippines, 2011.....	40
6	Wage Gaps by High School and College Education In Agriculture Sector, Philippines, 2011.....	41
7	Wage Gaps by Elementary and College Education In Agriculture Sector, Philippines, 2011.....	43
8	Wage Gaps by Gender in Manufacturing Sector, Philippines, 2011.....	44
9	Wage Gaps by Elementary and High School Education in Manufacturing Sector, Philippines, 2011.....	46
10	Wage Gaps by High School and College Education in Manufacturing Sector, Philippines, 2011.....	47



LIST OF TABLES

Table		Page
11	Wage Gaps by Elementary and College Education in Manufacturing Sector, Philippines, 2011.....	48
12	Wage Gaps by Gender in Services Sector, Philippines, 2011.....	50
13	Wage Gaps by Elementary and High School Education in Services Sector, Philippines, 2011.....	51
14	Wage Gaps by High School and College Education in Services Sector, Philippines, 2011.....	53
15	Wage Gaps by Elementary and College Education in Services Sector, Philippines, 2011.....	54
16	Wage Gaps in the Male Gender between Agriculture and Manufacturing Sector, Philippines, 2011.....	55
17	Wage Gaps in the Female Gender between Agriculture and Manufacturing Sector, Philippines, 2011.....	57
18	Wage Gaps in Elementary Education between Agriculture and Manufacturing Sector, Philippines, 2011.....	58
19	Wage Gaps in High School Education between Agriculture and Manufacturing Sector, Philippines, 2011.....	59



LIST OF TABLES

Table		Page
20	Wage Gaps in College Education between Agriculture and Manufacturing Sector, Philippines, 2011	61
21	Wage Gaps in Male Gender between Manufacturing and Services Sector, Philippines, 2011	62
22	Wage Gaps in Female Gender between Manufacturing and Services Sector, Philippines, 2011	63
23	Wage Gaps in Elementary Education between Manufacturing and Services Sector, Philippines, 2011	65
24	Wage Gaps in High School Education between Manufacturing and Services Sector, Philippines, 2011	66
25	Wage Gaps in College Education between Manufacturing and Services Sector, Philippines, 2011	68
26	Wage Gaps in the Male Gender between Agriculture and Services Sector, Philippines, 2011	69
27	Wage Gaps in the Female Gender between Agriculture and Services Sector, Philippines, 2011	70
28	Wage Gaps in Elementary Education between Agriculture and Services Sector, Philippines, 2011	73



LIST OF TABLES

Table		Page
29	Wage Gaps in High School Education between Agriculture and Services Sector, Philippines, 2011.....	74
30	Wage Gaps in College Education between Agriculture and Services Sector, Philippines, 2011.....	75
31	Comparison of Wage Gaps by Gender in Agriculture Sector using Quantile Regression, Philippines, 2011.....	81
32	Comparison of Wage Gaps by Elementary and High School Education in Agriculture Sector Using Quantile Regression, Philippines, 2011.....	82
33	Comparison of Wage Gaps by High School and College Education in Agriculture Sector Using Quantile Regression, Philippines, 2011.....	83
34	Comparison of Wage Gaps by Elementary and College Education in Agriculture Sector using Quantile Regression, Philippines, 2011.....	85
35	Comparison of Wage Gaps by Gender in Manufacturing Sector using Quantile Regression, Philippines, 2011.....	86
36	Comparison of Wage Gaps by Elementary and High School Education in Manufacturing Sector Using Quantile Regression, Philippines, 2011.....	87



LIST OF TABLES

Table		Page
37	Comparison of Wage Gaps by High School and College Education in Manufacturing Sector Using Quantile Regression, Philippines, 2011.....	89
38	Comparison of Wage Gaps by Elementary and College Education in Manufacturing Sector Using Quantile Regression, Philippines, 2011.....	90
39	Comparison of Wage Gaps by Gender in Services Sector using Quantile Regression, Philippines, 2011.....	91
40	Comparison of Wage Gaps by Elementary and High School Education in Services Sector Using Quantile Regression, Philippines, 2011.....	92
41	Comparison of Wage Gaps by High School and College Education in Services Sector Using Quantile Regression, Philippines, 2011.....	94
42	Comparison of Wage Gaps by Elementary and College Education in Services Sector Using Quantile Regression, Philippines, 2011.....	95
43	Comparison of Wage Gaps in the Male Gender between Agriculture and Manufacturing Sector using Quantile Regression, Philippines, 2011.....	96
44	Comparison of Wage Gaps in Female Gender between Agriculture and Manufacturing Sector using Quantile Regression, Philippines, 2011.....	98



LIST OF TABLES

Table		Page
45	Comparison of Wage Gaps in Elementary Education Between Agriculture and Manufacturing Sector Using Quantile Regression, Philippines, 2011.....	99
46	Comparison of Wage Gaps in High School Education Between Agriculture and Manufacturing Sector Using Quantile Regression, Philippines, 2011.....	100
47	Comparison of Wage Gaps in College Education between Agriculture and Manufacturing Sector using Quantile Regression, Philippines, 2011.....	102
48	Comparison of Wage Gaps in the Male Gender between Manufacturing and Services Sector using Quantile Regression, Philippines, 2011.....	103
49	Comparison of Wage Gaps in the Female Gender between Manufacturing and Services Sector using Quantile Regression, Philippines, 2011.....	104
50	Comparison of Wage Gaps in Elementary Education Between Manufacturing and Services Sector Using Quantile Regression, Philippines, 2011.....	106
51	Comparison of Wage Gaps in High School Education Between Manufacturing and Services Sector Using Quantile Regression, Philippines, 2011.....	107
52	Comparison of Wage Gaps in College Education between Manufacturing and Services Sector using Quantile Regression, Philippines, 2011.....	109



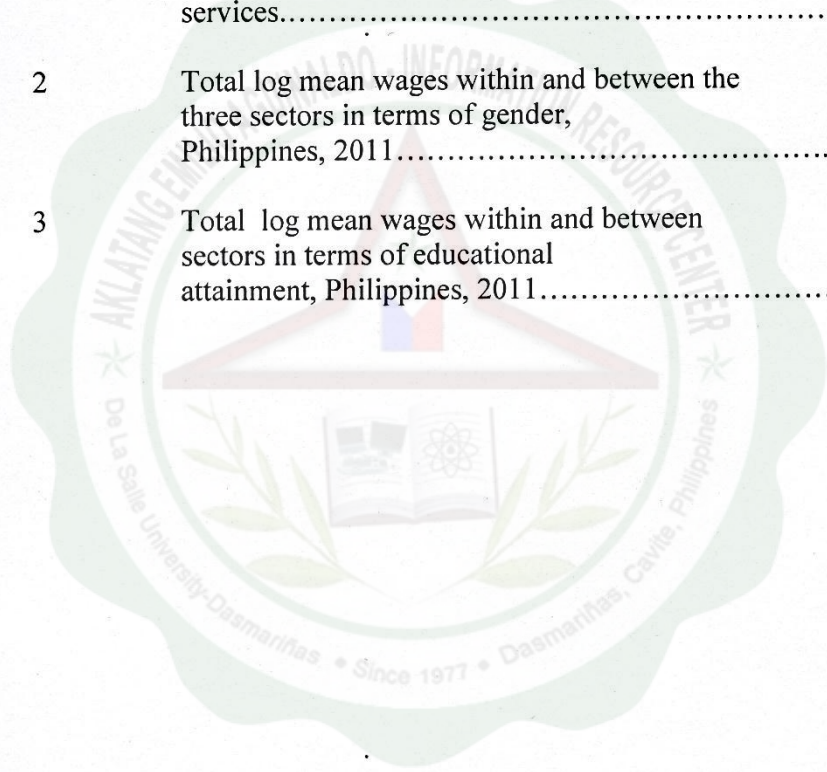
LIST OF TABLES

Table		Page
53	Comparison of Wage Gaps in the Male Gender between Agriculture and Services Sector using Quantile Regression, Philippines, 2011.....	110
54	Comparison of Wage Gaps in the Female Gender Between Agriculture and Services Sector using Quantile Regression, Philippines, 2011.....	111
55	Comparison of Wage Gaps in Elementary Education Between Agriculture and Services Sector using Quantile Regression, Philippines, 2011.....	112
56	Comparison of Wage Gaps in High School Education Between Agriculture and Services Sector using Quantile Regression, Philippines, 2011.....	114
57	Comparison of Wage Gaps in College Education Between Agriculture and Services Sector using Quantile Regression, Philippines, 2011.....	115



LIST OF FIGURES

Figure		Page
1	A framework showing the determinants of wage gaps within and between the three economic sectors: Agriculture, manufacturing, and services.....	31
2	Total log mean wages within and between the three sectors in terms of gender, Philippines, 2011.....	76
3	Total log mean wages within and between sectors in terms of educational attainment, Philippines, 2011.....	78





LIST OF APPENDIXES

Table		Page
1	Comparison of Wage Gaps by Gender in Agriculture Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	128
2	Comparison of Wage Gaps by Elementary and High School Education in Agriculture Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	129
3	Comparison of Wage Gaps by High School and College Education in Agriculture Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	130
4	Comparison of Wage Gaps by Elementary and College Education in Agriculture Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	131
5	Comparison of Wage Gaps by Gender in Manufacturing Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	132
6	Comparison of Wage Gaps by Elementary and High School Education in Manufacturing Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	133
7	Comparison of Wage Gaps by High School and College Education in Manufacturing Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	134
8	Comparison of Wage Gaps by Elementary and College Education in Manufacturing Sector Using Quantile Regression, Philippines, 2011.....	135
9	Comparison of Wage Gaps by Gender in Services Sector Using Quantile Regression, in Actual Wages, Philippines, 2011.....	136



LIST OF APPENDIXES

Table		Page
10	Comparison of Wage Gaps by Elementary and High School Education in Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	137
11	Comparison of Wage Gaps by High School and College Education in Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	138
12	Comparison of Wage Gaps by Elementary and College Education in Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	139
13	Comparison of Wage Gaps in the Male Gender Between Agriculture and Manufacturing Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	140
14	Comparison of Wage Gaps in the Female Gender Between Agriculture and Manufacturing Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	141
15	Comparison of Wage Gaps in Elementary Education Between Agriculture and Manufacturing Sector Using Quantile Regression, Philippines, 2011.....	142
16	Comparison of Wage Gaps in High School Education Between Agriculture and Manufacturing Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	143
17	Comparison of Wage Gaps in College Education Between Agriculture and Manufacturing Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	144



LIST OF APPENDIXES

Table		Page
18	Comparison of Wage Gaps in the Male Gender Between Manufacturing and Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	145
19	Comparison of Wage Gaps in the Female Gender Between Manufacturing and Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	146
20	Comparison of Wage Gaps in Elementary Education Between Manufacturing and Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	147
21	Comparison of Wage Gaps in High School Education Between Manufacturing and Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	148
22	Comparison of Wage Gaps in College Education Between Manufacturing and Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	149
23	Comparison of Wage Gaps in the Male Gender Between Agriculture and Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	150
24	Comparison of Wage Gaps in the Female Gender Between Agriculture and Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	151
25	Comparison of Wage Gaps in Elementary Education Between Agriculture and Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	152



LIST OF APPENDIXES

Table		Page
26	Comparison of Wage Gaps in High School Education Between Agriculture and Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	153
27	Comparison of Wage Gaps in College Education Between Agriculture and Services Sector Using Quantile Regression in Actual Wages, Philippines, 2011.....	154

