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IDE DISCUSSION PAPER No. 754

Inferences and Descriptive Analyses on
Education, Livelihoods, and Rural Poverty
through Fieldwork and Tailored Household
Survey in Marinduque, the Philippines

MASAYOSHI OKABE*

April 2019

Abstract

This paper spells out the descriptive information of our primary-data collection survey. The survey was conducted in the Marinduque province, the Philippines for researches on exploring male underperformance in education. The province was selected from the regions of typicality with the research topic in the country. The provincial economy is characterized as a rural economy in which primary sectors are prevailing. Self-employment miscellaneous occupations and public servants also prevail in the economy. The male youth in our sample underperform in education not only in academic achievements but also in enrollment status and daily activities as compare to their female counterparts. The male youth stopped or dropout from schooling earlier and more. While the hindrances to schoolings are generally common to both males and females, this paper presents some reported situations they face differently.

Keywords: Household Livelihoods; Schooling Status; Sample Profile; Marinduque; Philippines

JEL classification: C83; D64; I21; I24; I32; J13; J16; J21; O53

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INFERENCES AND DESCRIPTIVE ANALYSES ON EDUCATION, LIVELIHOODS, AND RURAL POVERTY THROUGH FIELDWORK AND TAILORED HOUSEHOLD SURVEY IN MARINDUQUE, THE PHILIPPINES*

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* *Acknowledgement:* The author acknowledges that the field researches and household survey were financially funded by the Toyota Foundation, Tokyo, Japan. The author also thanks that it has been under my visiting research fellow term with the School of Labor and Industrial Relations, University of the Philippines Diliman as fulfillment of overseas research fellow term of the Institute of Developing Economies, JETRO, that the author has been able to engage in the long-term field research activities. Special thanks go to local counterparts, among others to Ms. Lolita Natal and Mr. Delfin Natal Jr., and friends in the barangay Masiga, for plenty of helps and guidance. However, any opinions expressed in this paper are solely of the author's own and do not represent any of his affiliations and third parties.

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I. INTRODUCTION

This paper provides descriptive information of the primary data from household survey that the author conducted during his current overseas research fellow term in the Philippines. The research topic for the term is on explorations on the backgrounds of “boys’ underperformance in education” (UNGEI, 2012). The data was designed and collected to tackle this research. On one hand, this data is going to be employed for the further empirical analyses, thus this paper serves as basic source in knowing the sample villages in the regional context in the country. Here, the contents that are selectively illustrated include the regional geography and socio-economy, household livelihoods, and schooling status and the dropouts of education of children. On the other hand, it is serving as the self-standing information of a report on Marinduque, a rural Philippines, that existing literature in humanities and social sciences has rarely discussed. Furthermore, although the development and area studies introducing characteristics and monographs of some other regions in the Philippines, such as Central and Southern Luzon, Western Visayas, and even part in the Mindanao, are available, the Marinduque province contrastingly seems to have been seldom studied in the fields of social sciences and area studies, to the best of my knowledge.

The structure of this paper is as follows: The Section II describes the basic information of the Marinduque province, explains the reasons of choosing the province, and spells out the preliminary fieldworks that have been conducted in the villages in the province. The Section III explains the research designs, including sampling strategies of municipalities, *barangays*, and households in the province, and gives outlines of questionnaire survey. The Section IV provides information on household livelihoods based on descriptive analyses of the sample data, ranging from occupations and working status, educational attainments, coresidential status, and income profiles. The Section also infers the role of education for parents by a quantile regression analysis. Finally, the section V summarizes the children’s information from the sample households, by explain the age cohorts, school enrollment status, dropouts and stopping schoolings, delays in school grades, and descriptive analyses on their self-reported reasons why dropout or stopped schoolings.

II. THE MARINDUQUE PROVINCE AND SAMPLED VILLAGES

A. *Marinduque Province in MIMAROPA Region*

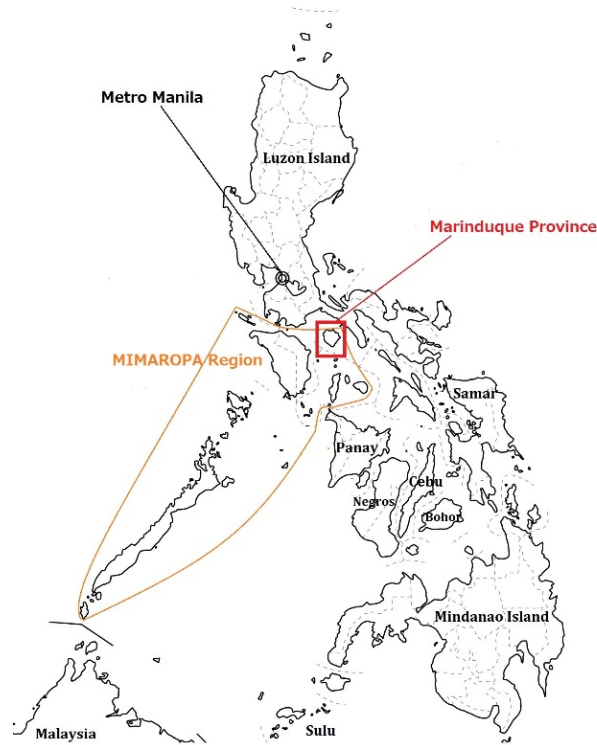
For the author’s upcoming studies, the primary data was collected from sample villages in the Marinduque Province, MIMAROPA Region, the Philippines (in Figure 1 and Figure 2). The MIMAROPA Region used to be part of the Southern Tagalog Region until 2002. Then, the Southern Tagalog Region was divided into the Regions IV-A (CALABARZON) and IV-B (MIMAROPA)¹. The term MIMAROPA is a capitalization of the Occidental and Oriental Mindro, Marinduque, Romblon, and Palawan. While the MIMAROPA and CALABARZON (Cavite, Laguna, Batangas, Rizal, and Quezon) used to

¹ More precisely, the Southern Tagalog Region used to comprise 11 provinces: five in the mainland Luzon (currently Region IV-A or CALABARZON); five island provinces (currently Region IV-B or MIMAROPA); and Aurora Province (currently part of Region III or Central Luzon Region).

comprise a single region, the MIMAROPA lags behind the CALABARZON economically. The CALABARZON is nowadays a surrounding region of proximity to Metro Manila and would rather be a suburban region already than rural region. The urban center Metro Manila has already been being overpopulated and the CALABARZON is serving as an industrial sub center absorbing people from Metro Manila and industrial complexes. In contrast, the MIMAROPA Region does not achieve that development.

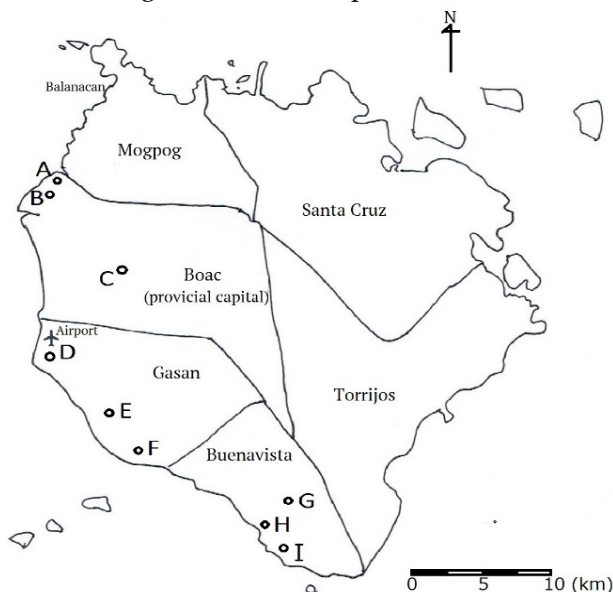
In the Region, the Palawan Province and Occidental Mindoro Province rank in the first income class and indeed the Palawan serves as a regional center. The Marinduque Province ranks in the fourth income class, following Romblon (3rd) and Oriental Mindoro (2nd). While the Palawan is rich in the natural resources, resort industry, and agriculture (particularly plantations) and the Mindoro is also that in agriculture (particularly coconut and *palay*), the Marinduque is less abundant regarding them.

Figure 1: Map of the Philippines



Source: Adapted from <http://www.freemap.jp>

Figure 2: Marinduque Province



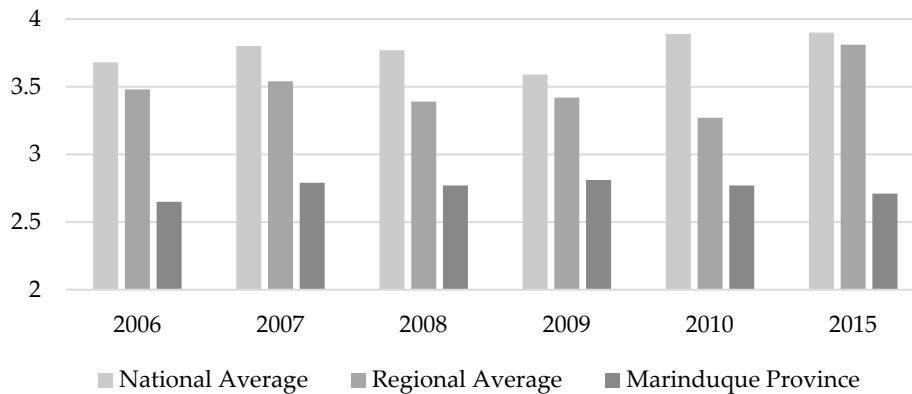
Notes: Circles A–I stand for the sampled nine *barangays*.
 Source: Author’s own hand drawn.

Like the other island provinces in the MIMAROPA, the Marinduque is also an island province, which corresponds to Marinduque (Boac) Island with some several small circumjacent islands. The Marinduque is the smallest province in the region; its land area is around 96 thousand hectare, following Romblon (around 136 thousand hectare), Oriental Mindoro (around 436 thousand hectare), Occidental Mindoro (around 588 thousand hectare), and Palawan (around 1.49 million hectare). Geographically in the center of the Marinduque Island, located is Mount Malindig with 1,157-meter elevation. Mountainous zones descending toward island contours are covered by forests and thus main residential and cropping zones are the limited to lowlands that were developed nigh to contours (sea lines). Due to small land of island, the cropping land available nigh to island contours can be subject to chloride damage from the sea, which leads to poor soil quality.

It is reflected to their poor agricultural productivity. For example, Figure 3 illustrates *palay* land productivity regarding national average, regional average, and Marinduque Province. The MIMAROPA’s regional average land productivity dips from national average and the Marinduque provincial land productivity further goes below the regional productivity. Though the provincial economy is highly dominated by primary sector (agriculture and fishery), the province are still being incapable to bring out high agricultural productivity. This also casts us a good contrast with the Bukidnon province, from which this author picked the data to study previously. Figure 4 illustrates the two-province comparison of the land productivity (MTN/ha) by crops. Whereas the both provinces are referred to as rural and poor provinces, the role or impact of agriculture differs across the two provinces; the Bukidnon province achieves much higher land productivity for not only *palay* but also corns and coconut (and also mango), but the Marinduque province

considerably lags behind it. Therefore, the Marinduque is regarded as a province of case study with less agricultural supremacy as a contributor to the regional economy than in the previous Bukidnon Province, while the both represent rural poverty.²

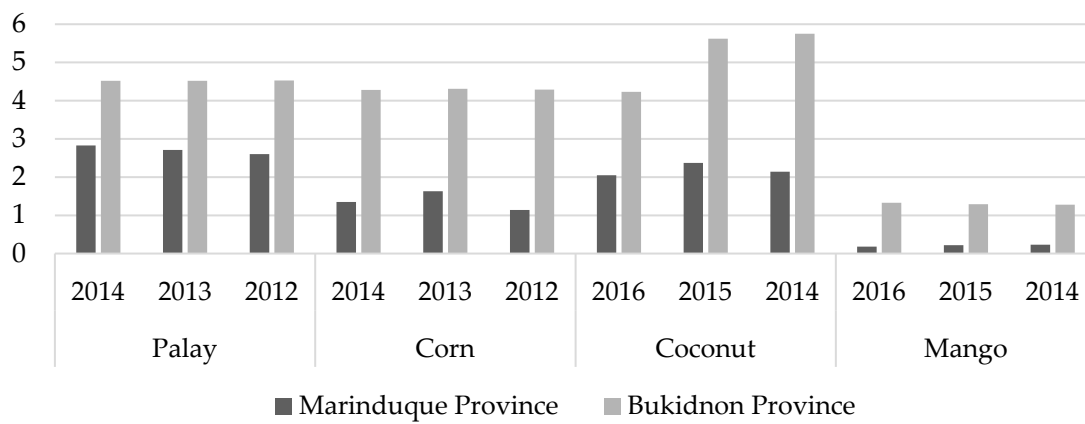
Figure 3: *Palay*: Yield-per-land Productivity (MTN/ha)



Note: The national average bar in 2010 actually is from 2013.

Source: 2006–2009 = Bureau of Agriculture Statistics and Regional Development Plan 2011-2016 National Economic Development Authority; 2010–2015 = Selected Statistics on Agriculture 2018 Philippine Statistics Authority and Regional Development Plan 2017-2022 National Economic Development Authority.

Figure 4: Two-province Comparison: Land Productivity (MTN/ha), by Crops



Source: Province Profiles, Philippine Statistics Authority.

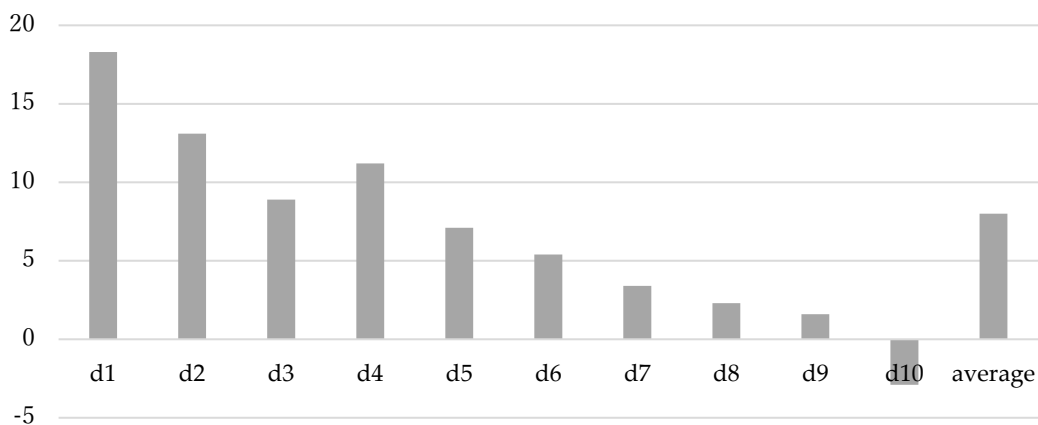
² Note that the geographical smallness of Marinduque Province does not matter the discussion of land-productivity comparison with other provinces because it is based on per hectare productivity.

B. Choice of Marinduque as Research Site

The reasons of choice of Marinduque as the research site include the property of being rural region and the typicality of the male issue in education. Some nationally representative statistical indices and preliminary survey confirmed that male-to-female enrollment ratio gaps in education grow typically in poorer populations and in and after secondary education. Because it is not a pivotal purpose for this study to merely test whether males are underperforming or not,³ one criteria of choice of research site is whether it is conspicuous for the region to be with the male-to-female gaps in education. It is in order to explore the background of such gaps.

Figure 5 illustrates the relation between the wealth index deciles and the female-to-male gaps in net enrollment ratios in the secondary education over the country. Apparently, the poorer households the children are from, the larger gender gap that fewer male children can go to schools grow. From this relation, the poverty should be one driving force to differentiate access to education between male and female children.

Figure 5: Female-to-Male Net Enrollment Rate Gaps (%), Secondary Education, by Wealth Index Deciles



Note: The horizontal axis stands for wealth index deciles: the “d1” is the poorest group (1st and the d10 is the richest group over the country. The bar graph takes 0 if the male and female net enrollment rates are the same. If the bar graphs are over (below) 0, it means fewer (more) male children are enrolling than their female counterparts.

Source: FIES 2015 and FLEMSS 2013.

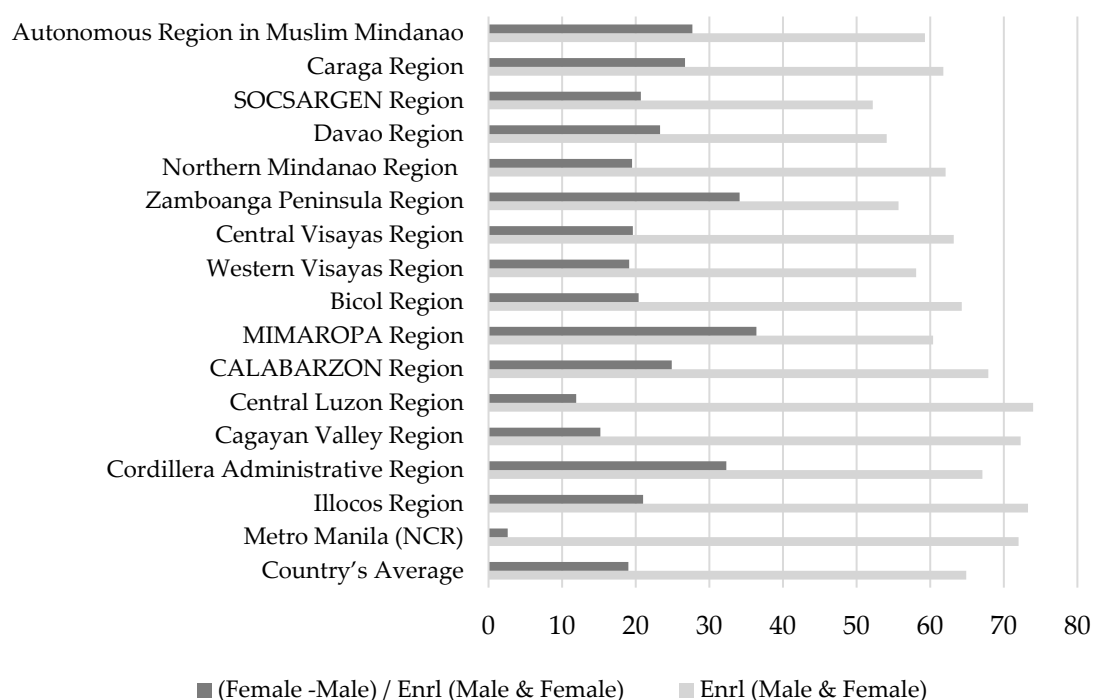
In a related move, the most newly available version of the nationally educational survey called the Functional Literacy, Education, and Mass Media Survey (FLEMMS) by PSA (2016) reports that the gender gaps in net enrollment are larger in remote rural regions that are out of Luzon Island than in urban centers (including Metro Manila) or regions rural but nigh to Metro Manila (e.g., Central Luzon Region and CALABARZON). Figure 6 visually illustrates this information: the black bars indicate the proportion of the female-minus-male

³ In other words, pivotal purposes of the current thesis do not include answering for a close or “yes-or-no” question but include answering for an open question “why” or “how.”

enrollment gaps relative to the overall enrollment rates with respect to each region. According to the 2013 survey, the MIMAROPA Region is found to be one of the cases with largest gaps in net enrollment ratios according. More broadly, on age 6–18 (school ages for elementary to upper-secondary education), Figure 7 illustrates the relative numbers of male children non-attending to schools to one non-attending female child, by regions. Outstanding in this figure is also the MIMAROPA Region. Yet, it is still noted that the high (low) relative male counts are different from the regional situations of enrollment per se. For example, while the relative male counts in the ARMM in Figure 7 is not so high (similar to that in the CALABARZON), the non-attendances per se occur most frequently in the ARMM out of the country (16%) whereas more or less 12% in other regions (Figure 8). Other cases include the Zamboanga Peninsula Region (Region IX) and Cordillera Administrative Region (CAR). In contrast, gender-equal access to education is relatively achieved in the Metro Manila, followed by Central Luzon Region (Region III).

I sounded out a possibility of receiving local assistance by collaborating with a local researcher from an NGO called Philippine Rural Reconstruction Movement (PRRM) located in Quezon City, Metro Manila. Then, a local assistant who worked as a *barangay kagawad* (village council) in the Marinduque was found for collaborating with the current researches. In August 2017, we made a first meeting in Metro Manila before going to their places.

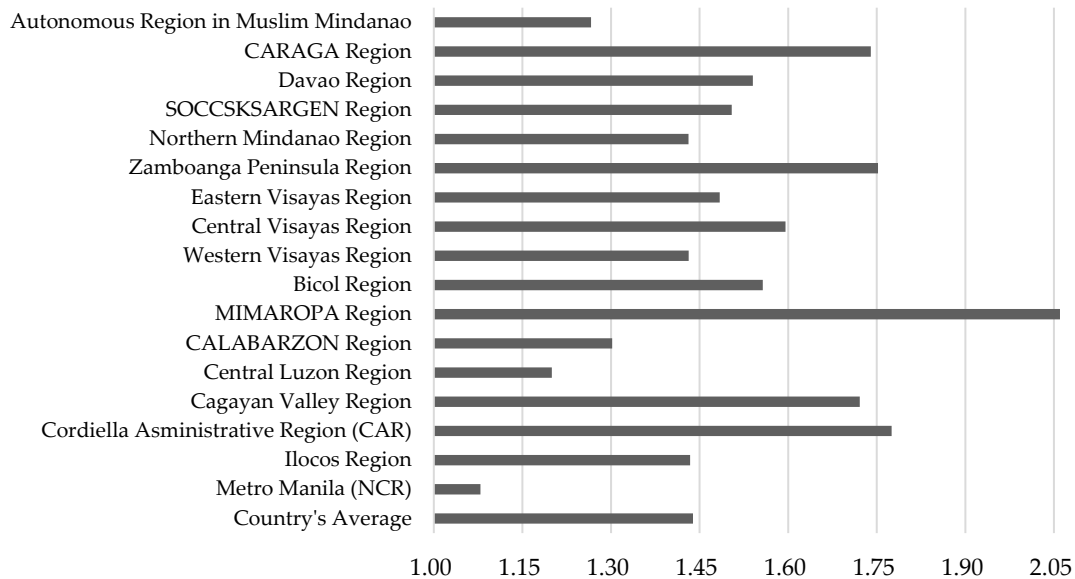
Figure 6: Gender Disparities in Net Enrollment Rates (%), Secondary Level, by Regions



Note: “(Female–Male)/Enrl(Male & Female)” means the proportion of differences of female-to-male enrollment rates over the total enrollment rates. “Enrl(Male & Female)” means the total enrollment rates of both males and females.

Source: FLEMSS 2013, PSA.

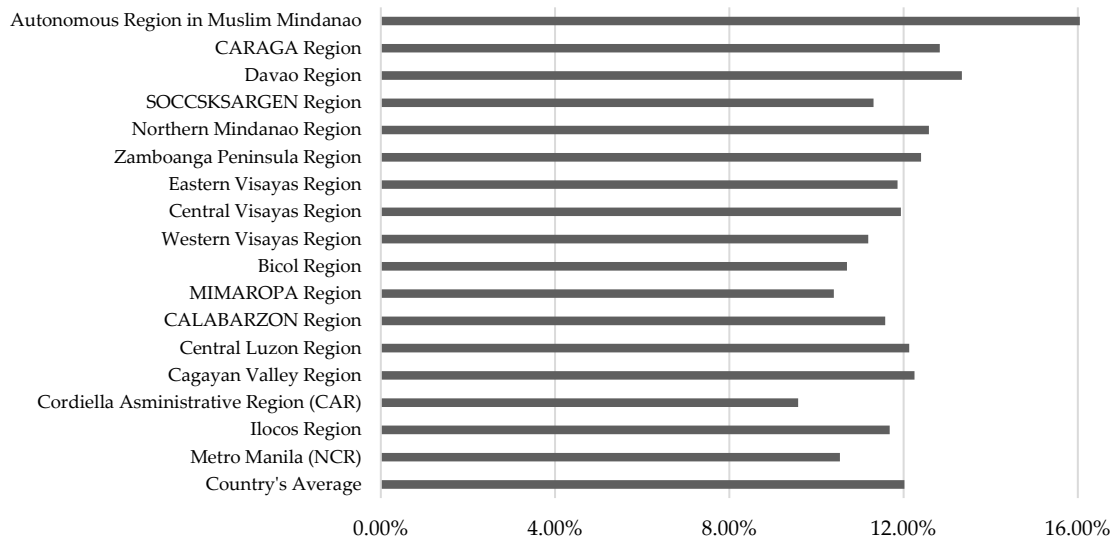
Figure 7: Relative Numbers of Non-attending Males to One Non-attending Female, Age 6–18, by Region



Note: 1.00 means the same frequency of non-attending over males and females. If more (fewer) than 1.00, it means the higher frequency of non-attending for males (females) than female (male) counterparts in the region.

Source: Author’s own calculation by LFS 2015, PSA.

Figure 8: Non-attending Rates of Children to Schools, Age 6–18, by Region



Note: Non-attending rates = 100% – (Attending Children / Total Children)%.

Source: Author’s own calculation by LFS 2015, PSA.

C. Preparatory Fieldworks to Determine the Research Site

Subsequently, in September 2017, the author started to visit the province to begin preliminary fieldworks in the province. The *barangay* of Masiga in the municipality of Gasan has been the point in which the author has stayed (circle D in Figure 2). This was like a pilot phase: examined was the extent to which the research collaboration with the local people and parties. In this phase, no structured questionnaires were set; rather than it, the author merely aimed at learning and observing the local livelihood, school environment, and local economy and at nonstructural open interviews with selected children and their parents. At the same time, we also worked on paying courtesy calls to related local-government-unit (LGU) parties, including *barangay* offices, mayor offices, and a local college. These continued intermittently until December 2017 together with other related activities.

Some preliminary interviews and observations confirmed that local people in the LGUs were sometimes keenly aware of the issue of “boys’ underperformance in education.” On other occasions, the author seemed to become an unwitting catalyst to make them be cognizant of the issue. In any case, the author was judging how the boys’ issue in education was prevalent in the places or problematized by local people themselves and then reached to conclude that this province was chosen as the research site where we would proceed further.

Working Women in a Handcraft Factory and their Woody Products (In Gasan, taken by the author, September 2017)



Source: Taken by the author.

III. RESEARCH DESIGNS OF HOUSEHOLD SURVEY

Our household survey was designed so that it would collect data exclusively for the set of current studies, unlike other data whose instructions, descriptions, and regional overviews are already published in other medium to which we can refer. Thus, this section begins with describing data collection, information, and basic observations of the data. The explanations of research designs and procedures in this section are applicable not only within this paper but also in the author’s upcoming studies that use the same survey in Marinduque.

A. *Sampling Strategy: Stratified Random Sampling*

Survey sampling design followed the stratified random sampling technique. The entire province of Marinduque was assumed as the population statistically. In this sense, the stratified random sampling was to focus on collecting the province-representing sample under our budget- and human-resource constraints. Three steps were followed; (1) choosing the municipalities, (2) sampling the *barangays* from the chosen municipalities, and (3) sampling the households from the sampled *barangays*. Thus, we have the three stratum.

In accordance with our human-resource and financial budgets as well as econometric feasibility, we first set our sample size 300 children as entity. Two children (siblings) per household are collected from 150 households. The criteria of choosing the children is to satisfy the age range between high-school age (12–18 mainly) so that the sample can mainly include the children of secondary education level; otherwise, if there were not full two eligible children in some households, we relaxed the age-range setting to elementary or tertiary level. Consequently, our sample typically consists of 12-18 aged children, with some proportions of younger or older children.⁴

B. *Choice of Municipalities*

Having begun to stay in one *barangay*, Masiga in the province in September 2017, the author had two choice; either to do a complete enumeration in the *barangay* or a sample survey. During the preparatory time of preliminary fieldworks, the author found the following features across the places, among others:

- The province is an agriculture-dominant economy and also dominated by fishery industry;
- Manufacturing sectors (but not large) such as handcraft factories and retail services are more dominant in some but a few areas;
- There is a heterogeneity of commercial activities and accessibility to schools (particularly high schools), depending on proximities to municipal centers;
- Local people reside not only in the low areas nigh to island contours but also in remote and somewhat isolated mountainous lands (unlike the neighboring island, no indigenous people are reported in the Marinduque Province);
- The extent to which infrastructure is developed differs across some clusters of places in the province (e.g., the arterial roadways make only nearby the island's contour line);
- Local people residing in the low lands tend to be uninformed of the livelihoods of those who reside in high hilly and bumpy lands.

These were found while the author did visitations to farm and hog-raising lands, fishing places, women's NGO activities, LGU offices, and provincial offices of national government—Department of Education (DepED), Department of Agrarian Reforms (DAR), and Department of Social Welfare and Development (DSWD)—and so on. The *barangay* Masiga seemed to be one intermediate area among these variations.

Therefore, we visited Marinduque State College (MSC), which is a local state college,

⁴ As it turned out, this relaxation resulted in better coverage as we could have the sample with the variation of transitions from elementary-to-secondary and secondary-to-tertiary levels.

and interviewed to a faculty of School of Liberal Arts as to how wide/narrow we needed to specify the geographic coverage for our household survey. Their suggestions included: the population should have diversity as compared to within-one-*barangay* survey and the municipality Gasan, where the *barangay* Masiga is located, is classified as a third income-class but there are richer and poorer municipalities at the same time, all led to a conclusion that we would follow a sample survey.

Geographically and administratively, there are six municipalities in the province. It has two higher income-class municipalities (Boac and Santa Cruz) and two lower income-class municipalities (Buena Vista and Torrijos), where there are intermediate-level two municipalities (Gasan and Mogpog) (see Figure 2). Namely, there are three classes in municipalities by LGU classifications. We received helpful comments by the MSC faculty saying that we needed to strategize the coverage. It would be satisfactory by picking up one municipality from each income class of three. The three municipalities, Boac, Gasan, and Buena Vista, were chosen in accordance with consideration of in-province variations.

C. Sampling Barangays

Subsequently, we went on choosing the sample *barangays*. Like the manner of choosing the municipalities, we needed to consider the variations inside each municipality. We received the municipality-level *barangay* lists from municipality halls with sets of advice from the administrators. Based on them, we classified the *barangays* into higher-, medium-, and lower-income groups within each municipality. Each *barangay* was attached its unique number, and three *barangays* were randomly chosen from each income group per municipality. This process yielded the nine *barangays* as sample (3 *barangays* × 3 municipalities).

The locations of nine *barangays* are displayed in Figure 2 (from A to I).⁵ First, in the municipality of Boac were randomly sampled the *barangays* A to C. Boac is the provincial capital and the *barangays* A and B are located nearby its town center. The *barangay* A is richer than B. The *barangay* C represents poorer *barangays* and is located in hilly and mountainous areas, which makes it geographically remote on highlands. People can commute by *dijipny* and tricycles to the *barangay* C's hall. From there, however, the households are located from place to place and there is no transportation mode to reach there. Local people complained that it was physically and mentally exhausting to go uphill and downhill when having events. It is particularly the case for children going to schools.

Second, from the municipality of Gasan, the *barangays* D to F were randomly sampled. The *barangay* D is actually Masiga, which is also the basement of our stay. The Masiga is located nearby the Marinduque Airport and the sea.⁶ Most of families are engaged in micro to small business, agriculture, or fishery. Commercial establishments such as

⁵ Due to the research ethics that we agreed with the informants and thus should follow, the exact names and locations of *barangays* are named alphabetically in the present studies so that anonymity can be kept where nobody can exactly identify the *barangays*, school names, and households etc. Even though the anonymity is kept, the most possible descriptions are attempted in the present studies and the anonymity is not intrinsically critical to core essence of discussions.

⁶ The Marinduque Airport was damaged hit by the typhoon of December 2016. Since then, the airport function has been ceasing. Under no function of airport, currently, the access from Manila to Marinduque relies only on bus and ferry, taking 13 to 15 hours.

grocery stores, convenience stores, and restaurants are rarely found in this area. If needed, people commute to a *poblacion* by tricycles for around 10–20 minutes. The *poblacion* is originally a Spanish word, literally meaning “town”, referring to town center areas. Still, the Masiga is classified as an intermediate income-level *barangay* in Gasan. The *barangay* E is located inside the *poblacion*. This is therefore nearby the municipality hall, commercial zones with ATM machine, restaurants, and grocery stores, thus represents higher-income *barangays*. In turn, the *barangay* F is classified a lower income level, located in-between Gasan to Buenavista. Some local people from the *barangay* F complained the underdevelopment of infrastructure in this area, including the poor internet access unlike other nearby *barangays*.

Finally, from Buenavista, the *barangays* G to I were randomly sampled. The *barangay* G is of lower income level and located in mountainous zones. The geographic daily impediments from which the local people suffer were reported to be similar to the ones previously explained by people from the *barangay* C in the municipality of Boac. The *barangay* H is located in the municipality’s *poblacion* and so in the central place of the municipality, which is similar to what the *barangay* E in the Gasan faces. The *barangay* I is classified as intermediate level of richness in the Buenavista with abundant rivers and groves.

Table 1: Industrial Characteristics of the Marinduque Province in Regional and National Contexts (% , 2015)

Occupation Categories	National		Region	Province
	Urban	Rural		
Private Household	6.66	4.38	4.43	4.58
Private Establishment	53.30	38.11	34.24	26.72
Governmental Corporation	9.38	8.62	9.62	12.21
Self Employed	23.08	32.94	37.42	45.80
Employer	2.64	4.73	4.31	1.53
With pay (Family-owned Business)	0.43	0.29	0.46	0.00
Without Pay (Family-owned Business)	4.51	10.94	9.53	9.16
Number of observations (persons)	28,814	49,734	2,392	262

Note: Region = MIMAROPA region (Region IV-B); Province = Marinduque province.

Source: LFS 2015, PSA.⁷

⁷ While the nationally representative LFS covers all the municipalities in the province of Marinduque, the geographic coverage of their sampling is different from our sample. Concretely, in the same municipalities of three, the common *barangay* that our sample and LFS share is only Buliasnin. The coverage of LFS is: in Boac, it is Agumaymayan, Balimbingo, Balogo, Buliasnin, Mataas na Bayan (*poblacion*), and Tampus (*poblacion*); in Buenavista, it is only Daykitin; and in Gasan, it is Bangbang and Tapuyan, while our sample cover is: in Boac, it is Poras, Buliasnin, and Mogpog; in Buenavista, it is Barangay III (*poblacion*), Libas, and Mogpog; and in Gasan, it is Barangay I (*poblacion*), Masiga, and Bacongbacong. The *poblacion* stands for the community central areas of the each municipality.

Over all the *barangays*, the livelihoods of the *Marinduqueño* people⁸ were typically observed to be dependent on primary industries such as agriculture (mainly paddy rice and coconut), horticulture (vegetables), and fishery. It also depends on craftworks and micro small business such as running *sari-sari* stores or selling a few privately cooked foods. The province's economy is outstanding in the regional and national contexts in terms of the dominance of self-employments. According to Table 1, the occupational rate of self-employment is as high as 45.80% in Marinduque province whereas 37.42% in the MIMAROPA Region and 32.94% in the national average of rural areas.

The province's high self-employment rate comes at the expense of the rate of private establishment is much lower in the province with 26.72% than regional and national rural averages, 34.24% and 38.11%, respectively. These imply that the private-firm driven sectors are, by and large, yet far from developing in the province. In exchange of its underdeveloped private sector, the governmental (public) sector absorbs more workers than regional and national rural average.⁹

D. Household Sampling

After the *barangays* were sampled, then the households were sampled. First, based on the information of residential households from the Community-Based Monitoring System (CBMS) 2014 that we got from each *barangay*, the master list was made. Secondly, out of the sample household size predetermined as 150, we computed the weights to calculate the relative sizes of each *barangay* in accordance with the population information in the CBMS, whereby we then allocated the weighted numbers of households for each *barangay* to be sampled. As the quotients were not perfectly aliquot, the actual total household size became 154. Due to the necessary anonymity of sampled *barangays* as well as sampled households, the relative numbers of populations *per se* are not displayed here. Instead, in a municipality level, the 154 households are allocated to three *barangays* in Boac for 39 households, to three *barangays* in Gasan for 58 households, and to three *barangays* in Buenavista for 57 households.

Finally, the unique identical numbers are attached to all the households in master lists. In accordance with the relative sample sizes for each *barangay*, the statistical software generated the same numbers of random digits and then the corresponding 154 households were sampled. In this step, to mitigate time loss in case we face long absence or refusal of some of the households, the random digits were generated once again excluding the firstly sampled households. This step yielded the list of substitute households in the case of the said absences or refusals. The visitation rule was also set in accordance with discussions with local counterparts to cope with them. Eventually, we encountered much fewer cases of absence or refusal than expected, and so the 154 households were sampled mainly based on the first list of random sampling.

⁸ The adjective of Marinduque is "*Marinduqueño*" in the Filipino language (originally Spanish inflected form).

⁹ In this sense, the Marinduque province is similar to the Bukidnon province in terms of the nature of underdevelopment of private sectors within the provincial economy and in the correspondingly substituting role by the public sector.

E. Questionnaire Survey Process

The questionnaire sheets were formed exclusively for the topics of current studies in a reflection of sets of previous preparatory fieldworks. The questionnaire survey comprises three parts: (a) household information, (b) basic information of the sampled children, and (c) time-use allocation survey of the sampled children for seven days. The author prepared all the questions and choices of answers in Tagalog (or Filipino), the local language, because a considerable proportion of the sample includes young children and out-of-school children/youths who were not always with no hesitations toward English. The interviewees were then allowed to answer in Tagalog.

The contents of the questionnaire in all the three parts needed to go through a content validation. We requested the validation to a faculty of the MSC. After slight modifications, we also conducted dry runs to some selected children from the *barangay* Masiga from December 2017 to early January in 2018 falling between year-ending and new-year vacations. The feedbacks from them were then reflected for the improvement and modification to finalize the questionnaire, including content- and language-related issues.

The home visitations and interviews with the questionnaire sheets took place from January to March in 2018. We visited all the households in the nine *barangays* in three municipalities. The local assistants were trained directly by the author regarding the research purposes, designs, manners, assumed troubles and solutions. During the home visitations, we also closely and almost every day kept contacting by the “Messenger” equipped to “Facebook,” so that discussions and both minor and major concerns should be shared and solved collaboratively on a real time basis. The questionnaire sheets consisted of self-administered and interviewer-administered questions. The detailed contents of the each part will be described in the author’s upcoming studies. The preparatory and preliminary fieldworks and human relations of good acquaintance enabled the author to face very few case of refusals.

IV. HOUSEHOLDS LIVELIHOODS: OUTLINES

A. Occupations and Working Status

Out of 154 households, the heads from 143 households (92.86%) answered that they are working (at least within these 6 months) while heads from 11 households (7.14%) not working. The spouses of 71 households (48.97%) answered that they are working (at least within these 6 months) while spouses from 74 households (51.03%) not working. Percentages of workers in each sector are classified and visualized in Table 2, Table 3, Figure 9, and Figure 10. Most workers are engaging in service sector (tertiary sector) (29.86%), followed by agricultural (22.2%), fishery (15.28%), manufacture industrial (14.58%), and retails (9.03%) and public (9.03%) sectors, respectively.

Typical jobs in the service sector include tricycle drivers, garbage collectors, massage therapists, caretakers and caregivers, cleaning service, security guards, and truck drivers. Retails typically correspond to *sari-sari* store business (a Filipino version of small-scale shops rooted in local communities) but also business with small pushcarts or *tindahan* (a Filipino word, coming from a Spanish word *tienda*). According to the free descriptive answers in our semi-structured parts in the questionnaire, the category of retails actually shows a various diversity, ranging from a truly individual- or family-based business without

stores just for selling daily snacks (*meryenda*) such as *mani* (roasted peanuts) and *balot/balut* (a Filipino traditional cooked egg, which means boiled developing bird embryo of usually a duck) to having some shop spaces or to having permissions to sell in more public spheres such as schools and public markets. Male heads tend to be hired by shop owners, while their female spouses tend to engage in self-employments who sell the cooked snacks and foods (street foods), the fermented foods (*bagoong*), the local confectioneries, and the clothes and needlework (pillows, sheets, bed-making items, and handkerchiefs).

Table 2: Cross Table of Working Status and Sector Classifications, Household Heads

Working status, head	Agriculture	Fishery	Manufacturing	Service	Retails	Public	Total
Land-owning farmer	8						8
Contract farmers	7						7
Agricultural worker	13						13
Self-employee	1	21	1	25	9	1	58
Short-term contract worker			11	12	1	3	27
Permanent contract worker	3	1	8	5	2	8	27
Proprietor, business					1	1	2
Managerial position			1	2		1	4
Total	32	22	21	43	13	13	144

Source: Author's own calculation.

Agricultural and fishery sectors, or the primary sectors, are also central industries where many household heads engage. Out of agriculture households, other than main agricultural farmers cultivating staples—*palay* (paddy rice) farmers, the 6 household heads engage in horticultural crops such as vegetables, fruits, and flowers (3 households as land-owning farmers, 3 households as agricultural wage laborers), and the 3 household heads engage in animal husbandry such as hog raising (1 head is self-employee, 3 heads are permanent-contract workers). Fishermen are also found frequently since the province is an island province surrounded by sea. In contrast, much fewer engage in the manufacture-industrial sector, or secondary sector. This corresponds to the history of industrial development in the Philippine economy (particularly in rural economies in this country).

Lastly, a few also engage in the public sectors, where the typical occupations include school teachers, who are highly dominated by female, and utility workers hired by schools and educational institutes, *barangay* halls, and other public facilities. Local Government Units (LGU) also provides the residents with the occupational opportunities: for instance, those who engage in this sector report that they are; *barangay* workers such as *barangay* captains, *kagawad* (councils), secretaries, treasurers, and health workers; civil security (police officers and firefighters); and regional officers in units such as headquarters

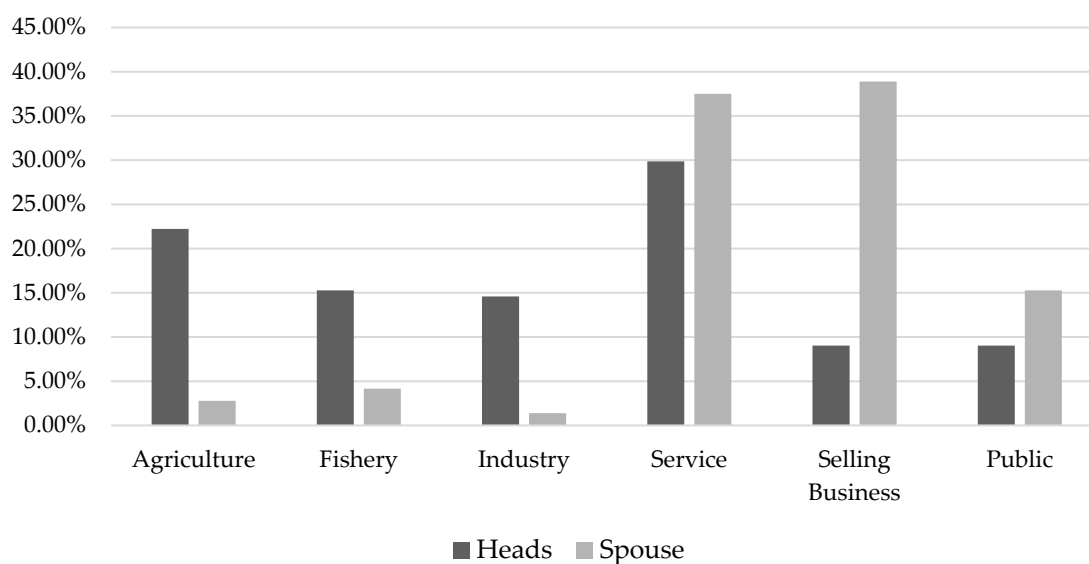
of the 4Ps by the DSWD. Remarkably, jobs in the service and public sectors and in retails are more occupied by female spouses while jobs in the primary sectors such as agriculture, fishery, and manufacturing industry sectors are by male heads. Somehow a “gendered” pattern over the sectoral occupations regarding men and women.

Table 3: Cross Table of Working Status and Sector Classifications, Household Spouses

Working status, spouses	Agriculture	Fishery	Manufacturing	Service	Retails	Public	Total
Land-owning farmer	1						1
Contract farmers							0
Agricultural worker							0
Self-employee	1	2		19	28		50
Short-term contract worker				4			4
Permanent contract worker		1	1	4		10	16
Proprietor, business							0
Managerial position						1	1
Total	2	3	1	27	28	11	72

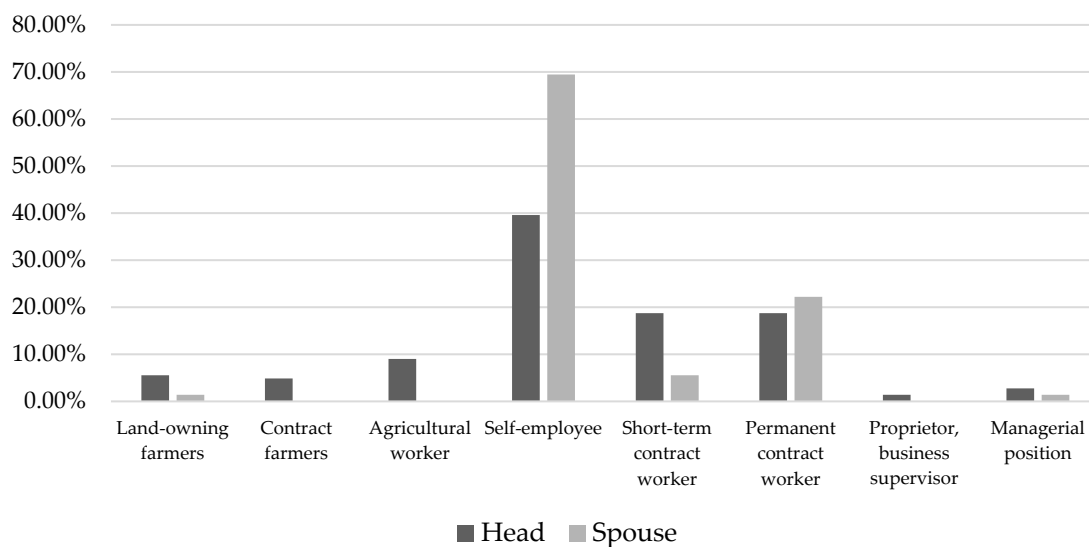
Source: Author’s own calculation.

Figure 9: Percentages of Occupational Distributions, by Industrial Categories, by Household Heads and Spouses



Source: Author’s own calculation.

Figure 10: Percentages of Working Status, by Heads and Spouses



Source: Author's own calculation.

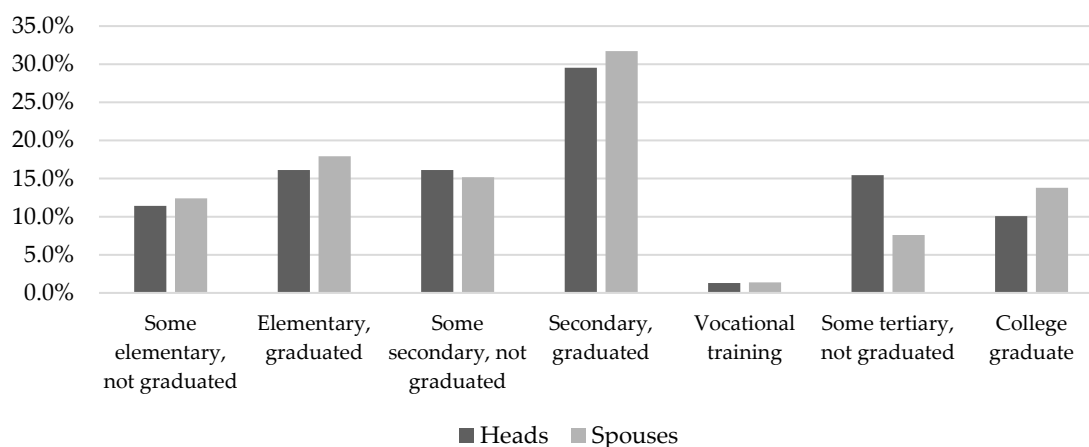
B. Educational Attainments, by Heads and Spouses

As is clearly seen in the Figure 11, majority of both household heads (29.5%) and his/her spouses (32.1%) graduated from secondary education (called *high schools* at that time), followed by elementary graduates (heads, 16.1%; spouses, 17.6%), not graduates but with some secondary level (heads, 16.1%; spouses, 15.3%), not graduates but with some elementary level (heads, 11.4%; spouses, 11.5%), not graduates but with some tertiary level (heads, 15.4%; spouses, 8.4%), and college graduates (heads, 10.1%; spouses, 14.5%). Since, of total household, the 93.51% are male (from 144 households) and the 6.49% are female (from 10 households), the educational attainments of heads imply the male one. Likewise, since of total household spouses the 92.86% are female (from 143 households) and the 1.29% are male (from 2 households)¹⁰, the educational attainments of spouses imply the female one.

In this sense, we can read the patterns that, although both heads and spouses at the time of their generations attained on average 9 years of education (close to but a little lower than graduation from secondary level), more spouses reached every stage of graduations over elementary, secondary, and tertiary levels, respectively, while more heads attained some but not graduation over elementary, secondary, and tertiary levels, respectively, which we would not be able to find if we measure their educational attainments just by the (mean values of) years of education.

¹⁰ The 5.84 % of household heads do not have their spouse (= 9 out of 154 households)

Figure 11: Educational Attainments, by Heads and Spouses



Source: Author's own calculation.

C. Coresidential Status

Table 4 confirms the coresidential status of heads and spouses with the rest members. The most of household heads and spouses live together with their family (85.71% and 91.03%, respectively). The 13 heads live in another place (8.44%) and in a foreign country as OFWs (3.90%); nine spouses do in another place (6.21%) and 4 spouses in a foreign country as OFWs (2.76%). Three heads passed away (1.95%), where it is difficult how to deal with the relations to head of the widows (widowers)¹¹.

Out of the six OFW heads, two are reported to be in Abu Dhabi, one is in Riyadh, one is in United States, and two are reported as commercial seamen (their family members said they did not identify the country where the two seamen were because the ships were internationally moving). Domestically, three are in the Laguna Province, Quezon Province, and Metro Manila, respectively, while others were unknown or unidentified exactly where they were living at the moment. Two heads were out of their homes because they were jailed due to drug abuses (one spouse was also jailed for the same reason). The four OFW spouses are reported to stay in Hong Kong, Australia, Saudi Arabia, and Riyadh.

In turn, Table 5 shows the numbers and percentages of sample households' total members who are living in other places and OFWs. In over 62% and 92% of households, respectively, no such members were reported respectively, while in over 37% and 7% of households, at least one member is reported to be the case, respectively. Aside from household heads and spouses, the family members living in other cities and as OFWs are typically their children who are now independent and make new livelihoods after

¹¹ For there are cases in which the widows describe themselves now as their new household heads. In these cases, we regard them as female heads. However, in these three cases, the spouses do not identify themselves as the new household heads. There would be two ways to identify relations to heads inside the household: regarding automatically the widows as new heads as long as the original head passed away, or daring respect how the widows perceive themselves in relation to the past heads. Since they do not identify themselves as their new heads even for our question clearly asking who the head is currently, we follow the latter.

graduations from schools and marriages. Some of them are reported to send remittances to the family members remaining in the original places in the Marinduque. In any case, in whole, the engagement as OFWs is not so prevailed in the sample, in comparison with the country's average 10% of populations engaging as OFWs.

Table 4: Coresidential Status, by Heads and Spouses

Status	Heads		Spouses	
	No.	%	No.	%
Lives together with family	132	85.71%	132	91.03%
Lives in another place : (Jailed)	13 (2)	8.44%	9 (1)	6.21%
OFWs in a foreign country	6	3.90%	4	2.76%
S/he died	3	1.95%	0	0.00%
Total	154	100.00%	145	100.00%

Source: Author's own calculation.

Table 5: Number of Households Having Members Living in Other Cities or OFWs

	Living in other cities		OFW	
	No. of HHs	%	No. of HHs	%
None	96	62.34%	142	92.21%
1 person	40		12	
2 persons	13	37.66%	0	7.79%
3 persons	1		0	
4 persons	4		0	
Total	154	100%	154	100%

Source: Author's own calculation.

D. Indirect Approach to the Changes of Educational Attainment over Past Four Decades

Though our sample information was collected as cross-section data, we can indirectly look on the dynamic changes over the past four decades of educational attainment across men and women by the educational attainment of adults (parents). Table 6 decomposes the average years of education across fathers and mothers by the generation cohorts, age 30s, 40s, 50s, and 60s plus. While this decomposition is not the perfect approach, we can still see the information even by the cross-section data because fathers and mothers were, needless to say, boys and girls when they were that young.

Decomposing the age groups into four decade categories shows that not only currently, women have also been better attaining education than men over these decades. Noteworthy is that the differences between women and men have also been diminishing over the same time span whereas the total average years have been improving. The same

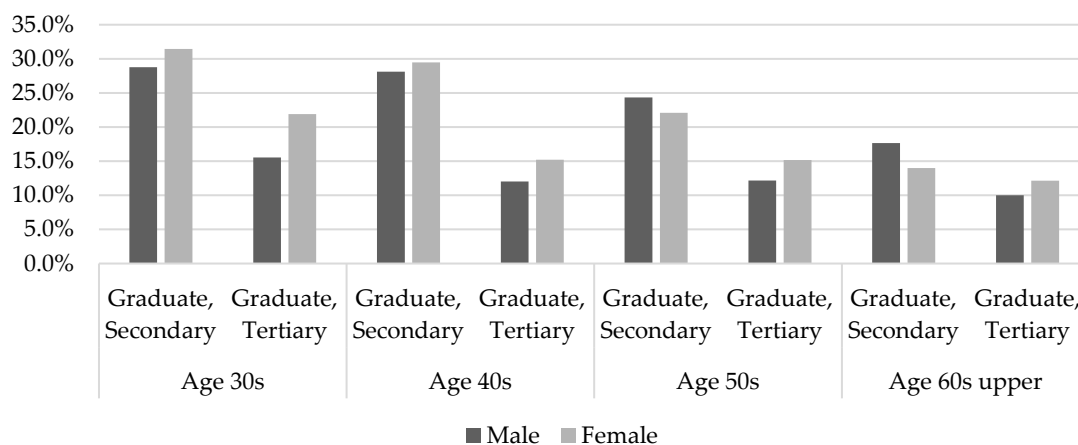
trends should also be confirmed by nationally representative data. Using LFS 2015, Figure 12 illustrates the males' and females' percentages of secondary- and tertiary-level graduates over all populations. Since the years of education are not used in the LFS, we just compare the final educational attainments of secondary- and tertiary-level graduates.

Table 6: Educational Attainment: Over Past Four Decades, Sample Adults (Average years)

Age	Males	Females	Average	Dif. (Mother–Father)
30s	9.11	9.50	9.31	0.39
40s	8.84	9.22	9.03	0.38
50s	8.36	8.76	8.56	0.40
60s	8.56	9.10	8.83	0.54

Source: Author's own calculation.

Figure 12: Educational Attainment: Over Past Four Decades, Adults in National Data (Secondary- and tertiary-level Graduates)



Source: Author's own calculation by LFS 2015, PSA.

E. Income and Schooling in the Parental Generation: Quantile Regression Approach

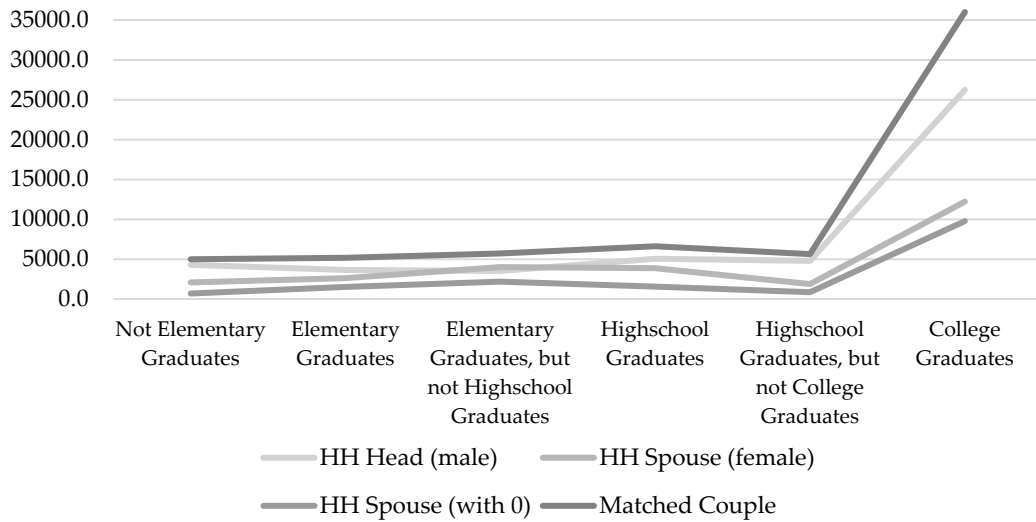
Since the incomes or wages of the individuals who are currently children are not yet observable, let us look on the returns to schooling in their parental generation instead of the children. In order to intuitively see the nexus between schooling and income, the Mincerian equations are estimated for household heads and spouses.¹²

Before regressions, let us first confirm visually. Figure 13 shows the distributions of mean incomes (in ₱, monthly) by household heads and spouses, by educational levels. The

¹² This specification here is a very simple variation of Mincerian equation where the causality may not be ensured due to the potential endogeneity such as the omitted variable bias. In this sense, therefore, we can interpret the coefficients of the education variable just as associations.

line “HH Spouse (with 0)” shows the actual mean incomes, including the sample spouses who are not earning when calculating the mean income, and the line “HH Spouse” excluded such spouses not earning. The line “matched couple” draws the sum of mean income of HH heads and that of “HH Spouse (with 0)” at each educational level (so not meaning the real couples). Figure 13 first shows that, the income earned by college graduates is significantly higher than the income earned by those who did not reach to the college-graduate level. On average, college graduates earned six- to 6.6 times more than non-college graduates, based on our sample data. Household heads earns more than their spouses on average, even if excluding the sample spouses with zero earning. This figure, therefore, eloquently illustrates that the graduation from colleges is crucial in income generations. In other words, unless succeeding in the college level, the income earned in future would highly be instable and low, even if completing the secondary-level education.

Figure 13: Mean Income by Household Heads and Spouses, by Educational Levels (Pesos)



Source: Author’s own calculations.

Subsequently, let us confirm statistically. Let us construct a quantile regression model:

$$\ln W_{j,\tau}^R = b_{0\tau}^R + b_{1\tau}^R S_j^R + b_{2\tau}^R A_j^R + b_{3\tau}^R (A_j^R)^2 + b_{4\tau}^R F_j^R + e_{j,\tau}^R,$$

where, at each $\tau\%$ income quantile, the dependent variable is the log income W earned by household head or spouse, $R = \{\text{Head, Spouse}\}$, in the household j , and the independent variables are educational attainment S , which is measured by years of completed education; their age A and age square A^2 as proxies of experiences; and the female dummy variable F .

Table 7: Mincer Equation Estimation, Quantile Regression, HH Heads ($N = 310$)

	log income					OLS
	$\tau = 10\%$	$\tau = 30\%$	$\tau = 50\%$	$\tau = 70\%$	$\tau = 90\%$	
<i>Female (=1)</i>	-0.005 [0.16]	-0.040 [0.03]	-0.025 [0.03]	0.000 [0.01]	0.000* [0.00]	-0.042 [0.04]
<i>Age</i>	-0.023** [0.01]	-0.017** [0.01]	-0.010** [0.00]	0.000 [0.00]	0.000 [0.00]	-0.023** [0.01]
<i>Age square</i>	0.000** [0.00]	0.000** [0.00]	0.000** [0.00]	0.000 [0.00]	0.000 [0.00]	0.000** [0.00]
<i>Education Attainment</i>	0.141*** [0.01]	0.113*** [0.00]	0.120*** [0.00]	0.119*** [0.01]	0.112*** [0.00]	0.138*** [0.00]
Constant	1.202*** [0.29]	1.588*** [0.22]	1.359*** [0.15]	1.114*** [0.06]	1.187*** [0.00]	1.457*** [0.27]
Pseudo R squared	0.687	0.742	0.773	0.806	0.843	0.887 [¶]

Note: Numbers in brackets are the bootstrapped standard errors with 50 iterations.

[¶] Adjusted R square.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$.

Source: Author's own calculations.

Table 8: Mincer Equation Estimation, Quantile Regression, HH Spouse ($N = 148$)

	log income					OLS
	$\tau = 10\%$	$\tau = 30\%$	$\tau = 50\%$	$\tau = 70\%$	$\tau = 90\%$	
<i>Age</i>	-0.127 [0.18]	0.066 [0.13]	-0.039 [0.10]	0.048 [0.11]	0.174 [0.11]	0.052 [0.08]
<i>Age square</i>	0.002 [0.00]	0.000 [0.00]	0.000 [0.00]	-0.001 [0.00]	-0.002* [0.00]	-0.001 [0.00]
<i>Education Attainment</i>	0.065 [0.05]	0.103** [0.04]	0.115*** [0.03]	0.155*** [0.02]	0.156*** [0.03]	0.128*** [0.02]
Constant	8.917** [4.41]	4.164 [3.52]	7.848*** [2.45]	5.940** [2.94]	3.495 [2.91]	5.353*** [2.03]
Pseudo R squared	0.050	0.024	0.075	0.159	0.259	0.143 [¶]

Notes: Female dummy is omitted because all the spouses in this estimation are female. Numbers in brackets are the bootstrapped standard errors with 50 iterations.

[¶] Adjusted R square.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$.

Source: Author's own calculations.

First of all, OLS estimators are reported in the rightmost columns in Table 7 for household heads and in Table 8 for the spouses, respectively. Table 7 shows that the marginal increase of years of schooling leads to 13.8% increase in the earned income by household heads, and Table 8 shows 12.8% increase in the earned income by their spouses.

Then, let us see the results of quantile regressions, which implied different stories between the heads and spouses. The quantile regression estimators show that, their educational return is higher among household heads with lower income (starting from $\tau = 10\%$). The higher income the household head earns (i.e., the higher the τ is), the returns on education diminishes from 14.1% to 11.2%. This 2.9% diminishment is statistically significant at 5% level with the F statistics = 6.56. In contrast, when it comes to the spouses of household heads, the qualitatively inversed story emerges. The quantile regression estimators in Table 8 show that, their educational return is lower among their spouses with lower income (starting from $\tau = 10\%$). The higher income the spouses earn (i.e., the higher the τ is), the returns from education increases from 6.5% to 15.6%. This 9.1% of positive shift is statistically significant at 10% level with the F statistics = 2.90.

The results from quantile regressions imply that there is some sort of increasing returns to scale regarding income level for the spouses, who are female. When a spouse does not earn much, her educational attainment is almost not contributive to her earning. Then, when she earns more, her educational attainment comes to be increasingly contributive to her earning as her earning increases. In other words, education is critical for those spouses who are reaching to high income. In contrast, the returns to scale for the household heads are decreasing regarding income level. His education is critical when a household head does not earn much. As he earns more, his educational attainment comes to be marginally less contributive to his earning. This corresponds to a neoclassical assumption that marginal return is diminishing to scales.

Probably, the increasing returns for spouses may be reflected by their labor-force participations. Some spouses with higher educational attainments would work while they are concurrently engaged in motherhoods, as they can be recognizant of returns from their education. However, other spouses with lower educational attainments would not be able to find such working opportunity, leading income gaps between working spouses and non-working spouses. Subsequently, this parental information of high and increasing returns from education to their income will simulate their female children to pursue education more.

V. SCHOOLING STATUS OF THE CHILDREN

This section provides descriptive analyses as to schooling status of the sampled children in our survey in the context of their livelihoods. The aims of this sections are, on one hand, for understanding the sampled children regarding their educational status and circumstances by basic educational indices, and on the other hand, of preparatory provision of illustrative information of the education of sampled children for better interpretations of discussions appearing in the author's upcoming studies.

A. Age Cohorts

Table 9 shows sex-decomposed distributions of the sample by cohort. The sample consist of children whose ages range from 8 to 25 (see also Figure 14). In the total numbers,

females counts slightly more than males (52.3% and 47.7%, respectively). Majority of the sample corresponds to the age range of secondary education level (ages 12 to 17) counting 70.6% (44.5% for junior high school level and 26.1% for senior high school level, respectively), followed by the age range of college/post-secondary level (21.9%) and the age range of elementary level (8.7%). In the junior high school level, though our sample contains relatively equal numbers between males and females, male students are slightly more in elementary level and fewer in senior high school and college/post-secondary levels.

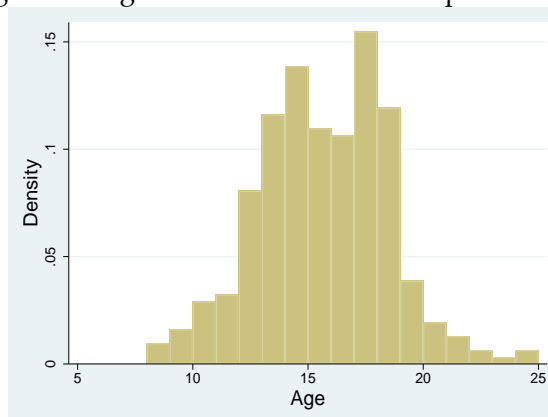
Table 9: Male and Female Distributions in the Sample by Cohort

Age	Expected Right Grades	Female (F)	Male (M)	Both Sexes (B)	M/B per cohort	M/B per school level	B/T per school level	
8	Elementary	Grade 3	1	2	3	66.7%		
9		Grade 4	2	3	5	60.0%	55.6%	8.7%
10		Grade 5	3	6	9	66.7%		
11		Grade 6	6	4	10	40.0%		
12	JHS	Grade 7	10	15	25	60.0%		
13		Grade 8	19	17	36	47.2%	50.0%	44.5%
14		Grade 9	20	23	43	53.5%		
15		Grade 10	20	14	34	41.2%		
16	SHS	Grade 11	19	14	33	42.4%	39.5%	26.1%
17		Grade 12	30	18	48	37.5%		
18	College / PS	College 1 / PS 1	25	12	37	32.4%		
19		College 2 / PS 2	3	9	12	75.0%	41.2%	21.9%
20		College 3	1	5	15	33.3%		
21		College 4	2	2	4	50.0%		
22			0	2	2	100.0%		
23			0	1	1	100.0%	80.0%	1.6%
24			0	1	1	100.0%		
25			1	0	1	0.0%		
Total (T)			162	148	310	47.7%	47.7%	100.0%

Note: "Expected Right Grades" merely indicates the expected grades in accordance with age. It thus does not necessarily mean that the child in the age is actually enrolling in the expected right grade due to, e.g., repetitions, late entry to school, stopping schooling, or dropout.

Source: Author's own calculation.

Figure 14: Age Distribution in the Sample Children



Source: Author's own calculation.

B. School Enrollment Status of the Children in the Sample

Table 10 and Table 11 show the school enrollment status by men and women. Table 10 includes all the children about whom the respondents of household questionnaire survey answered, with 531 individuals, and Table 11 includes only those children who are in the time-allocation survey, with 310 individuals.

Table 10: School Enrollment Status, by Sex: All Coresident Children

Full Sample	In Numbers			In Percentage		
	Female	Male	Total	Female	Male	Total
Going to schools currently	234	212	446	88.97	79.10	83.99
No longer going to schools / Finished schooling	29	56	85	11.03	20.90	16.01
Total	263	268	531	100	100	100

Source: Author's own calculation.

Table 11: School Enrollment Status, by Sex: Children in the Time-Allocation Survey

Diary-taker Sample	In Numbers			In Percentage		
	Female	Male	Total	Female	Male	Total
Going to schools currently	157	124	281	97.52	83.22	90.65
Enrolling, but stopping temporarily	2	11	13	1.24	7.38	4.19
No longer going to schools / Finished schooling	2	14	16	1.24	9.40	5.16
Total	161	149	310	100	100	100

Source: Author's own calculation.

In Table 10, it is confirmed that 84% of children are enrolling in and going to schools and the 16% are not. By sex, among the 16%, which is equivalent to 85 children, 21% men and 11.03% women are not enrolling in schools. Men are twice as probably to leave schools as are women. In turn, likewise, Table 11 exhibits the similar tendency among the sample of those who participated in our time-allocation survey (basically focused to 10–18 aged children among the all children). The difference from Table 10 is that Table 11 contains the decomposed information as to whether the not enrolling children are just temporarily stopping going to schools or no longer going to schools. According there, 9.35% of children are not going to schools: 4.19% temporarily stopping and 5.16% having decided no longer to go to schools. However, here is greater gendered imbalance in these categories than in the whole sample. Among the female children, 2.48% are either enrolling but stopping temporarily going to schools or no longer going to schools/finished schooling. In contrast, as many as 16.78% male children are classified as the same categories.

A probable reason why the percentage proportion of men-to-women who are not going to schools increases more in men than in women from the whole sample is because the time-allocation survey participants are basically focused on the right age range of secondary education. This age effect is thought more to limit the sample to school-aged children than the whole sample which is thought to cover the children with more widely ranged age.

Our next concern is the school levels of enrollees. First, among the 446 enrollees in Table 12, majority with 200 children are at junior high school level, followed by elementary school level with 120 children, senior high school level with 82 children, college level with 23 children, nursery/kindergarten with 17 children, and post-secondary vocational school level and the not specified with 2 children, respectively.

Between men and women, the change occurs at the senior high school level. Although there is not a difference in the junior high school level, in the senior high school level women are more enrolling than men. It is noteworthy, however, that in the college level, more men are going to colleges than women. This can make us be hopeful in terms of male entries to colleges. Still, we need to consider the recent changes in the Philippine educational system.

Under the K–12 program, the newly graduates from junior high schools now have to enroll in senior high schools before colleges unlike prior to the program. The current college students used to be high school students when the K–12 program did not reached to the senior high school level. As long as the male enrollment probability decreases at the newly emerging senior high school level more drastically than female (even after considering the weight sample-size difference between males and females shown in Table 9), we still need to note that it may be possible, the men's future enrollment situation will be worsen. The qualitatively same stories as aforementioned so far are also applied to the time-allocation survey participants in Table 13 for the other sample.

Table 12: School Levels where Enrolling, by Sex (Whole Sample)

	In Numbers			In Percentage		
	Female	Male	Total	Female	Male	Total
Nursery/Kindergarten	10	7	17	4.3%	3.3%	3.8%
Elementary School	53	67	120	22.6%	31.6%	26.9%
Junior High School	105	95	200	44.9%	44.8%	44.8%
Senior High School	55	27	82	23.5%	12.7%	18.4%
Post-secondary Vocational	2	0	2	0.9%	0.0%	0.4%
College	9	14	23	3.8%	6.6%	5.2%
Not specified	0	2	2	0.0%	0.9%	0.4%
Total	234	212	446	100.0%	100.0%	100.0%

Source: Author's own calculation.

Table 13: School Levels where Enrolling, Sex (Time-Allocation Survey Sample)

	In Numbers			In Percentage		
	Female	Male	Total	Female	Male	Total
Elementary School	20	33	53	12.74%	26.61%	18.86%
Junior High School	85	66	151	54.14%	53.23%	53.74%
Senior High School	47	17	64	29.94%	13.71%	22.78%
Post-secondary Vocational	2	0	2	1.27%	0.00%	0.71%
College	3	8	11	1.91%	6.45%	3.91%
Total	157	124	281	100.00	100.00	100.00

Source: Author's own calculation.

C. Dropouts and Stopping Schooling

One of the most valuable information from our survey is regarding dropouts and stopping schooling (*tumigil sa pag-aaral sa paaralan*). The school levels where those who are not going to schools made the decision to stop it are illustrated in Table 14. It is eye-opening that some male students left school even when they were in the elementary school level. In contrast, two female students seem to have left schools when they reached to almost graduation from high school. The elementary level of the Philippines has been compulsory and, if public schools, with free tuition. Moreover, the tuition of public high schools have also been free.

According to the interviews to the children, their decisions to stop going to schools were mostly reported to have been made by themselves. Out of the 12 children who stopped going to schools, nine children responded to us that it was their own decisions (one is girl and eight are boys), and only one girl and one boy answered (total two) to us that they actually and still wanted to go to schools when they were forced to make the decisions. They also answered that they left from schools when they were at grade 7 (high-school first year) and they had wanted to continue up to graduation from the high school but actually could not. It was unanswered for the rest of one boy. Also to those who describe themselves as not

any longer going to schools, the same stories are applied.

Among the 29 children who are not going to schools either temporarily or any longer, the 26 children answered for our question as to whether they want to go back to the schools in the (near) future (Table 15). Then, the 11 children (two girls and nine boys) answered that they do not want and the 15 children (two girls and 13 boys) answered that they want, regardless of some of them having described themselves as not going schools any longer. Out of those 15 children who answered yes, 12 boys said they wanted to go back to school within the coming half a year, and one girl and one boy said within the upcoming one year, as their willingness and hope.

Table 14: School Levels where Decisions to Stop Schooling Were Made

	Temporarily			Any Longer		
	Female	Male	Total	Female	Male	Total
Halfway through Elementary 3	0	1	1	0	1	1
Halfway through Elementary 4	0	1	1	0	2	2
Halfway through Elementary 5	0	0	0	1	2	3
Elementary, Graduate	0	0	0	0	2	2
Halfway through High school 1	0	3	3	0	1	1
Halfway through High school 2	0	1	1	0	1	1
Halfway through High school 3	1	0	1	1	3	4
High school, Graduate	1	1	2	0	2	2
Halfway through College 1	0	2	2	0	0	0
Unknown	0	2	2	0	0	0
Total	2	11	13	2	14	16

Source: Author's own calculation.

Table 15: Whether Want to Go Back to Schools

Willingness Current Status	No, not want to go back			Yes, want to go back		
	Female	Male	Total	Female	Male	Total
No longer going to schools	1	8	9	1	4	5
Yes, but stopping temporarily	1	1	2	1	9	10
Total	2	9	11	2	13	15

Source: Author's own calculation.

D. Time-use of the OOSY

When the school-aged children dropout schooling or stop going to schools, what activities are allocated instead of schooling? Figure 15 illustrates the cumulative bar chart with regard to the relative ratios of each time use between the OOSY and the children going

to schools (abbreviated as in-school youths (ISY) in Figure 15). The 50% line indicate the point where the time spent by the two groups is relatively homological.

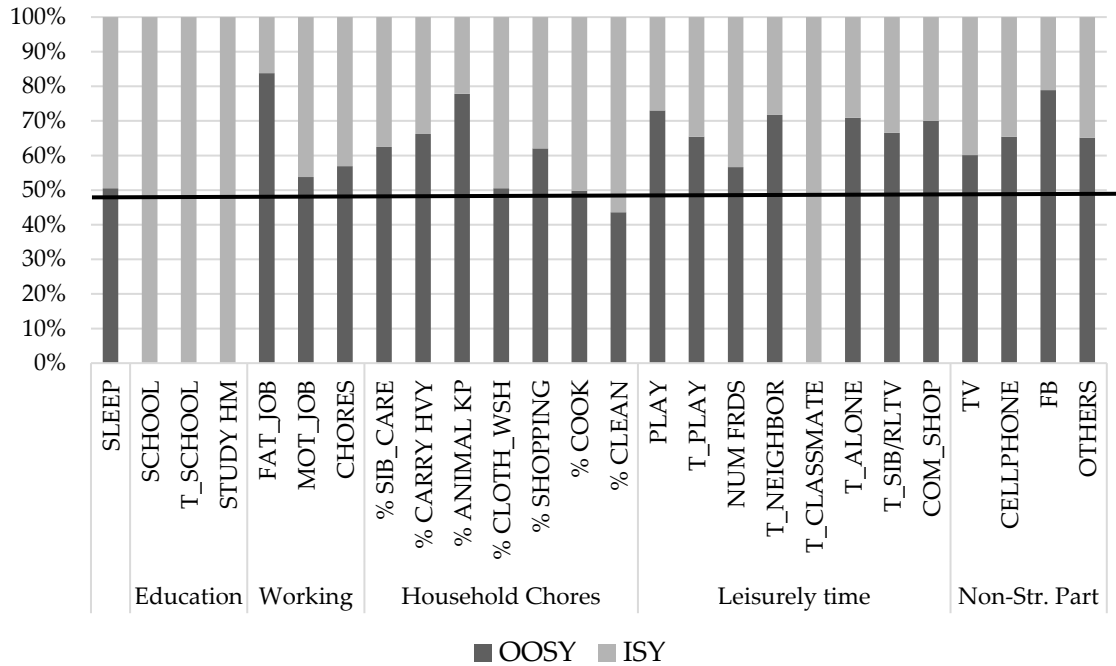
Figure 15 classified time uses into sleeping, education, working, leisurely activities, which were asked to our sample respondents by structured time-use survey; and non-structured parts. The education category includes times allocated for schooling and studying at home and the frequency (in times per week) of attending schools. The working category includes the time allocated for helping for fathers' and mothers' jobs and for household chores. In regard to household chores, our time-allocation survey further disaggregatedly asked the frequencies of engagements with some chores in detail. Not only the length of time allocated to household chore, this frequency information also captures the differentiation between the two groups in regard to the chores handled. The leisurely time category includes the time allocated to play outside and/or with friends, the frequency (days per week) of playing, the number of those with whom the respondent had played (zero means having played alone) and who they were (neighborhoods, classmates, siblings/relatives, or alone), and the time allocated to use the computer-game shops. Finally, the survey has a non-structured part where respondents could report with free description if any. From those activities reported in the non-structured part, the times allocated to watch TV, play with cellphones, use the Facebook, and for others are calculated into bars.

Obviously, OOSY do not spend at all the time for schooling and studying at home, and even if they play outside with somebody, no classmate are there. The OOSY are more likely to allocate further more time to help for fathers' jobs and to play outside with more friends. Given that more males tend to be OOSY, it implies that the OOSY are engaged with laboring with paternal jobs. In contrast, even the OOSY do not spend clearly longer for mothers' jobs and household chores. These somewhat maternal domains seem not to be drastically substituted even in the case of the children not schooling. Yet, whereas the lengths of the time allocated to household chores do not much differ between the two groups, the OOSY are more likely to engage with field-based chores such as animal husbandry and carrying heavy items from or to their houses.

Yet, OOSY seem to be able to allocate considerable time also for playing or leisurely activities. They also allocate longer for watching TV, playing with cellphones, enjoying the Facebook, and doing some other activities¹³. After quitting schooling, it seems interesting that the considerable part of their time ever previously allocated to education is not highly substituted by working and the OOSY appear to exercise some choice of leisurely activities longer than those who are schooling. Here, a pause not to overly make these interpretations determinate is also needed as these interpretations are preliminary because other factors need to be simultaneously controlled by methods in multivariate analysis.

¹³ The "other activities", for example, include the "*pag-sisimba*" (attending the church on Sundays), accompanying their parents to go to town centers, attending a funeral of somebody passed away, and attending a marriage ceremony.

Figure 15: Cumulative Bar Chart of Time-Use, by OOSY and In-school Youths



Notes:

1. Education – “SCHOOL” is in minutes of attending schools per week; “T_SCHOOL” is in times (frequencies) of attending schools per week; “STUDY_HM” is in minutes of studying at home per week.
2. Working – “FAT_JOB” is in minutes of helping for fathers’ jobs per week; “MOT_JOB” is in minutes of helping for mothers’ jobs per week; “CHORES” is in minutes of helping for household chores per week.
3. “Household chores” – Out of all the respondents who did household chores, “%_SIB_CARE” is the percentage of those who did sibling cares; “%_CARRY_HVY” is the percentage of those who did carrying heavy items from/to the houses; “%_ANIMAL_KP” is the percentage of those who kept animal husbandry; “%_CLOTH_WSH” is the percentage of those who washed or helped washing the clothes; “%_SHOPPING” is the percentage of those who did went to buy some items needed in the family; “%_COOK” is the percentage of those who cooked or helped cooking; and “%_CLEAN” is the percentage of those who cleaned or helped cleaning the premises and facilities inside and outside the house.
4. “Leisurely activities” – “PLAY” is in minutes of playing outside and/or with friends per week; “T_PLAY” is in frequency (times) of playing outside and/or with friends per week; “NUM FRDS” is in number of those with whom the respondent played per week; “T_NEIGHBOR” is in the frequency of playing with neighborhoods per week; “T_CLASSMATE” is in the frequency of playing with school classmates per week; “T_ALONE” is in the frequency of playing alone per week; “T_SIB/RLTV” is in the frequency of playing with siblings/relatives per week; and “COM_SHOP” is in minutes of using computer-game shops.
5. “Non-str. Part” means non-structured part. “TV,” “CELLPHONE,” and “FB” are in minutes of enjoying watching TV, cellphones, and the Facebook, respectively.

Source: Author’s own calculation from author’s own survey data.

E. *Students Enrolling in Right Grades*

In turn, to what extent can the enrolling students stay in the right grades expected by their ages? Here, the “right” grades are assumed by calculations of the students’ age. For example, the children aged six are assumed to enter and enroll in the Grade (GR) 1 in elementary level. Then, as long as they can be promoted to next school grades every year without delays, they are assumed to reach to GR6 at the age of 12.

Table 16 illustrates the result of calculation that shows, with setting the starting age of six as the right age for GR1, the proportions of the same school-age cohort students in the right GRs and in the delayed GRs, respectively, by sex. The school-age cohort is an adjusted age based on the Philippine school calendar which starts in June and ends in May. The rightmost row shows the average numbers of each column.

Table 16: Decompositions of Enrolling Students into the Right Grades (GRs) and in the Delayed GRs, by School Age Cohort and Sex (%)

Age	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	Ave.
(1) Percentage of Those Students in the Right Grades:																
Male	50.0	20.0	0.0	0.0	13.6	3.2	15.4	3.0	0.0	4.8	0.0	22.2	0.0	50.0	0.0	12.1
Female	50.0	20.0	12.5	36.4	22.7	12.9	10.3	0.0	22.2	4.8	0.0	0.0	0.0	0.0	0.0	12.8
(2) Percentage of Those Students in the Delayed Grades:																
Male	0.0	40.0	62.5	36.4	45.5	48.4	33.3	36.4	37.9	28.6	23.3	55.6	66.7	25.0	100.0	42.5
Female	0.0	20.0	25.0	27.3	18.2	35.5	41.0	60.6	48.3	61.9	76.7	22.2	33.3	25.0	0.0	32.6

Source: Author’s own calculation.

On average, out of enrolling students, only a quarter of students are enrolling in the right GRs (12.1% + 12.8% = 24.9%) and three quarters are enrolling with delays (42.5% + 32.6% = 75.1%). By sex, although there is not significant difference between male and female students among those students who are in the right GRs, more male students are enrolling with delays than female (42.5% vs 32.6%). In other words, across all the school-cohort age students, the most dominant students are males with delays, followed by female students with delays, male students in right GRs, and female students in right GRs.

The author had been explained to by the students and parents in the preliminary fieldwork that the delays in the GRs would trigger preventing students from continue to stay in schools any longer. For example, the elder students in the younger GRs with younger classmates are likely to feel ashamed. Here, let us see one case who reported us that he felt his classroom environment awkward.

[A case of a 14 year old boy, Niko]

A 14 year old boy, Niko, born on December 28, 2003, was enrolling at grade 7 (first

year in the junior high school) when we interviewed him and his family.¹⁴ In general, the students aged 14 are assumed to enroll in GR 9 (third year in the junior high school) but Niko was two-year delayed than assumed based on his own school-age cohort. He was going to a public high school located in his municipality where most of other high-school-aged students living in this place are also enrolling. Inside the classroom, majority was two-year younger classmates than him. Niko already looks like a growing adolescent with masculinity already, in a visual sense.

One day, some neighboring adults found Niko giving water to plants and flowers in a school flowerbed outside the classroom, in the hot sun, and despite during the class time. Those neighbors asked him why he was doing such a thing while he was expected to be seated inside and listening to the class. Niko answered that he was doing it because his teacher commanded him to do it. Still, Niko was asked why he had to do that while he was to do his study. Sheepishly, he challenged describing what had happened to him that his teacher said he was an older boy and looked more matured than other classmates, and he was judged by the teacher to be a suitable student among his classmates to work it in that way.

The adults certainly described that it was very natural that Niko could be standing out in a sense, due to his age, and that he was feeling awkward, on a routine basis, in the classroom with his teacher and classmates. Yet, it was indeed reported to be also heartbreaking for neighbors to witness him being forced to work giving water to flowerbeds outside. The neighbors, in heart, began to feel somewhat against to the teacher with a critical emotion.

Niko is ninth among his 11 siblings. He has a bit old mother, Melia, 51 years old, a widow. Her husband (Niko's father) went away long ago abandoning his responsibility to feed up their children. Since then, Melia has alone been feeding her 11 children by working as a self-employee to make pillows, bed covers, and bed sheets. Melia herself attained the educational level of only GR 5, having quitted schooling before graduating from elementary school, but she has sent some of 11 children up to senior high schools and even to the college. Melia narrowly earns only PhP 1,500 monthly by her small business. In the past, she had been able to earn the double, PhP 3,000, two years ago, but she came only to earn its half, PhP 1,500, from last year. In addition to Melia, an elderly brother of Niko, 17 years old, who dropped out of his high school and is currently working in Metro Manila serving as a waiter in a restaurant, additionally sends remittance to the family with PhP 500 monthly. Easily imagining, it is still humble and the family's life is even hard. A life in Manila is also hard, in which only a humble part of his earning can finally be remitted to his family, with a love to family. The family was yet not chosen to be a beneficiary of the government's 4Ps program.

¹⁴ The reason of past tense is because, when it was October 2018 when the survey had already been finished, he quitted schooling and moved to Quiapo in Manila City to pursue his "*kasama*" or "GF" (indirectly girlfriend). His neighbors were disappointed at this because of his too myopic decision sacrificing his future.

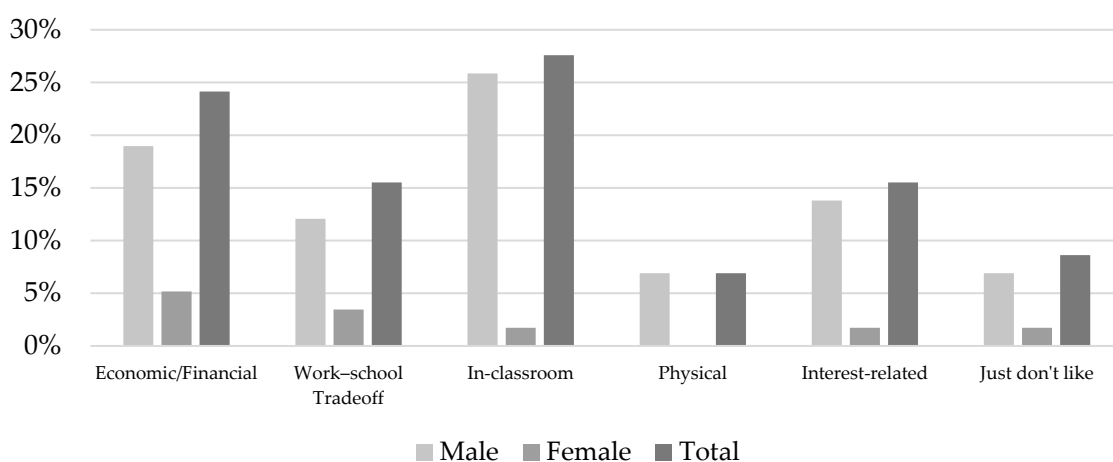
Niko, therefore, had been intermittently stopping schooling so that he got older than his classmates. He was willing to go to school, partially because he already knew some of his brothers had gave up. However, the treatment of teacher was reported to have been discouraging Niko to keep the current attitude toward learning.

At the same time, in Table 16, it should be also noted that, from age 14 to 18, a greater proportion of female students are enrolling with delays. The problem of delay is also as common to female students as to that of male students.

F. Self-Reported Reasons Why They Stopped Schooling

Figure 16 shows the self-reported reasons why they stopped schooling (up to 3). Table 17 is a decomposed version of each reason into more detail ones. Figure 16 tells us that most typical reasons include the in-classroom and economic/ financial aspects, followed by work-and-school tradeoffs, interest-related aspects, and physical aspects. Five children out of 58 claims as a kind of tautology that they do not like schools because they just do not like it (in their local language expression, e.g., " *Wala lang/Ayoko, kasi wala lang/ ayoko.*").

Figure 16: Distribution of the Reasons to Have Stopped Schooling: What Aspects



Source: Author's own calculation.

While these patterns show differences in frequencies, in fact, each reason can be related each other. For example, some in-classroom experiences such as difficulties to keep catching up with classes should be associated with their abilities of regular attendances and in- and out-class reviewing. If students cannot totally or well do it, they may begin to lag behind his or her other classmates in comprehending contents of classes. Especially if the households suffer from economic/financial hindrances, it is easily imaginable that the children would be asked to or they would feel as if they are being

demanding to contribute to household livelihood whether indirectly or directly.

Thus, it is noteworthy that the said intra-household contributions such as familial helping for parental jobs or just for household chores—more generally called a genre of unpaid works—would serve as a “silent” burden on children. Such intra-household contributions are perceived not violating the legislations or ethics for child labor. If the experiences in the classrooms are always negative, a student would start perceiving that everything is against him or her, in such that the teachers would not understand him or her. Or if they already found more enjoyable things including playing outside, roaming around with their friends and companions, or sports, then these must look vividly attractive to them.

An aspect that even a few students described “just because I don’t like” as their reason can also be reflected by the aforementioned sequence as it is a kind of resignation of oneself or of regressive attitude toward thinking anything.

Table 17: Self-Reported Reasons Why They Stopped Schooling (Up to three reasons)

Reasons	Male	Female	Total
<i>Economic/Financial Aspects:</i>			
No job, parents	1	0	1
School project fee	5	1	6
Transportation fee	1	1	2
Tuition fee	3	0	3
For my other sibling	0	1	1
I don't have/have few stationary goods/school items	1	0	1
<i>Working–school Tradeoff:</i>			
Need to work for my family needs	4	2	6
Need to work for my own needs	3	0	3
<i>In-classroom Aspects:</i>			
Teacher is not understanding me	4	0	4
Bully by other student	2	1	3
Difficulty in catching up with classes	9	0	9
<i>Physical Aspects:</i>			
I am tired always	3	0	3
I have sickness/ I am ill	1	0	1
<i>Interest Aspects:</i>			
Love to play/drink/smoking	0	1	1
Lack of interest in schooling	8	1	9
<i>“I don’t like schools because I just don’t like it”</i>	4	1	5
Total	49	9	58

Source: Author’s own calculation.

VI. SUMMARY

This paper has provided the regional characteristics by which the choice of research site was given, outline information of the sample households regarding their parents and children from socioeconomic to educational aspects, and results of some descriptive analyses related to these issues. First, the Marinduque Province in the MIMAROPA Region is interpreted as a part of rural Philippines. The region is characterized as one of the typical regions where relatively more males have faced disadvantages in education than their female counterparts.

Economically, agriculture and fishery are predominant in the province. However, for example, as compared to the Buidnon Province, the data from which was availed in the previous Part, the Marinduque Province is characterized as a province much less productive in agriculture. In addition, Marinduque Province as well as other provinces in the MIMAROPA Region are island provinces, geographically separated each other. These initial conditions embedded with the province imply economically disadvantaged from the richer regions.

Over the generations, the males have been lagging behind their female counterparts in educational spheres, according to descriptive analyses using the sample data. The overall educational situations seem to have been improving as time went by, but the gender gaps persistently remain. One of indirect inference is done by quantile regressions of parental income profiles, indicating the heterogeneity of returns from education between males and females. For females, there would be positive increasing returns from their education to scales regarding income levels for females, which could then serve as one of incentives for their female children to pursue education.

Both male and female youths and children have already faced difficult situations before accessing to education. Yet, it is more typical for male youths and children to leave from schools as compared to their female counterparts. Surely, poverty representing economic and financial obstacles should be one of the most typical reasons. At the same time, however, they are also facing non-economic obstacles making them quit schoolings. These patterns are considerably differentiated between males and females. All of these pieces of information serve as a good starting point to dig deeper the issues empirically in the related studies by this author.

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