



RESEARCH ARTICLE

OPTIMIZING MATRICULATION COLLECTION THROUGH SCHEDULING PARAMETERS

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ARTICLE INFO

Article History:

Received 13<sup>th</sup> March, 2017

Received in revised form

09<sup>th</sup> April, 2017

Accepted 26<sup>th</sup> May, 2017

Published online 20<sup>th</sup> June, 2017

Key words:

Optimizing,  
Matriculation collection,  
Scheduling parameters.

ABSTRACT

Optimizing matriculation collection is a responsibility of every higher education institution. This study was conducted to optimize matriculation collection through scheduling parameters of Jose Rizal Memorial State University System, school year 2016 – 2017. Descriptive survey method of research was used with the aid of questionnaire checklist which was administered to 360 students, 167 teachers, and 12 tellers in which collected data were treated via frequency count, percent, and Chi-Square test. Finding revealed that the university carried out various matriculation collection practices for allowing students meet their fee obligations which in turn registered huge amount of receivables. Further, payment of Php 500 upon registration and three equal installments of the remaining each of which shall be paid during the conduct of the preliminary, midterm and final examinations was preferred to optimize matriculation collection. However, this requires that the university should develop a policy standard to strongly support the matriculation collection procedures and scheduling parameters of the university. As the economic landscape continues to change, it has become increasingly important that those responsible for the administration of public funds in the university develop processes through which funds are appropriately collected and managed.

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Citation: Patrick G. Galleto and Evelyn R. Campiseño, 2017. "Optimizing matriculation collection through scheduling parameters", *International Journal of Current Research*, 9, (06), 52201-52206.

INTRODUCTION

Matriculation collection represents the lifeblood of every institution of higher learning. It supports students' access to services and facilities offered by the institution. This demands that institution of higher learning should have matriculation collection strategies and functional procedures. Impotantly, appropriate scheduling to optimize matriculation collection should be established to ensure business in place and warrants financial support to technical and subtantive maintenance to the operations and projects of the institution. Republic Act 8292 or the Higher Education Modernization Act of 1997 provides that State Universities and Colleges (SUCs) Boards have the power to fix the matriculation fees and other school charges and at the same time adopt and implement a socialized scheme of tuition and school fees for greater access to poor but deserving students. In more specific terms, SUCs are authorized to retain and utilize their income generated from matriculation fees and other charges.

Manasan and Revilla (2015) posited that matriculation fees account for the bulk of total SUCs income from students. Hence, SUCs should collect all fees at the most efficient manner. On the other hand, Manasan and Revilla (2015) asserted that an assessment and/or review on the income collection and utilization of SUCs has become mandatory. It is pointed out further that reviewing the specific sources of internally generated income of SUCs analyzes how these incomes are allocated and utilized. Tolentino (2014) also posited that a more realistic and justifiable budget plan ensure the improvement of infrastructure and school equipment. In so doing, the matriculation collection strategy encourages SUCs to use their economic assets to maximize their income-generating capabilities (Cuenca, 2011). However, records showed that in Jose Rizal Memorial State University System matriculation collection evidently painted a bleak picture of receivables. Non-payment of matriculation fees has become a persistent challenge of the university since not all students are able to pay their obligation on time and in full. For this reason, this study was conducted to specifically determine the family source of income of the students, verify the students' matriculation payment, find out the current mode of students' matriculation payment and scheduling parameters, determine the monthly

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receipts and statement of receivables of the university for calendar years 2013 – 2015, establish the optimal matriculation collection through scheduling parameters as perceived by the students and teachers, and establish the students' and teachers' preference on the major examination scheduling parameters. The offshoot of the study would serve as strong basis in redefining the university's matriculation collection procedure that would be both beneficial to the students and the university as a whole.

## MATERIALS AND METHODS

This study employed the descriptive survey method of research with the aid of the validated researcher-questionnaire checklist. Interview with student leaders was conducted to supplement the data gathered through the research instrument. There were 360 student-respondents in which 135, 110, 51, and 64 were from Dapitan, Dipolog, Katipunan, and Tampilisan, respectively; 167 teacher-respondents in which 71, 40, 26, and 30 were from Dapitan, Dipolog, Katipunan, and Tampilisan, respectively, and 12 teller-respondents in which 3, 3, 2, 2, and 2 were from Dapitan, Dipolog, Katipunan, Tampilisan, and Siocon, respectively. Frequency count and percent were used to quantify the surveyed data. Chi-Square test was also utilized to determine the significant association in the responses of the respondents in optimizing the matriculation collection and the scheduling parameters.

## RESULTS

Figure 1 reveals that more than 40 percent of the surveyed students (42%) belonged to families whose income was derived from farming. This means that greater proportion of families whose students are in the university primarily depends on farming as the main source of living. This implies that the affordability of the parents to send their children to the university relies mostly in farming. This supported the fact that Zamboanga del Norte is an agricultural province. Although, it can be viewed in the figure that there were students in the university whose source of family income was derived from government and private employment. Yet, a small proportion of the students in the university engaged in fishing. The figure shows further that considerable percent of the families (12%) was involved in other activities just to earn an income. Interview revealed that some families were engaged in driving (habal-habal), sari-sari store, fruit and fish vending. Overall finding manifested that 60 percent of the surveyed students in the university belonged to below average earning family. Among the farmers, about 40 percent indicated that income of the family occurred every four months which usually happened in April and August every year. Interview revealed that these families earned larger income than those with quarterly, semi-annually, and monthly harvests. But, it is a disadvantage since it takes long time for the harvest to recur. However, August harvest is found timely for the opening of the semester which certainly provides the children to enrol in the university. On the other hand, quarterly harvests often fell in December, July and March. It is timely likewise for about 30 percent of the students whose family earned income in July since this month is the enrolment period in the university. It is important to note, however, that family monthly harvests were engaged by about 30 percent of the surveyed students. Interview supported that these families earned income that primarily provided the needs of the family.

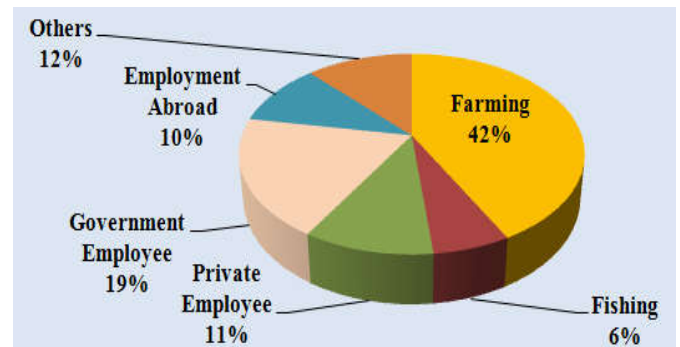


Figure 1. Source of Family Income

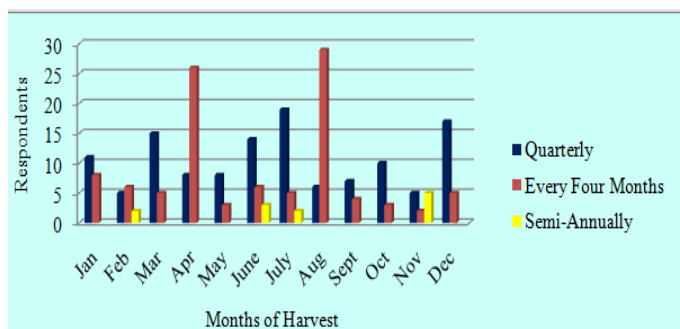
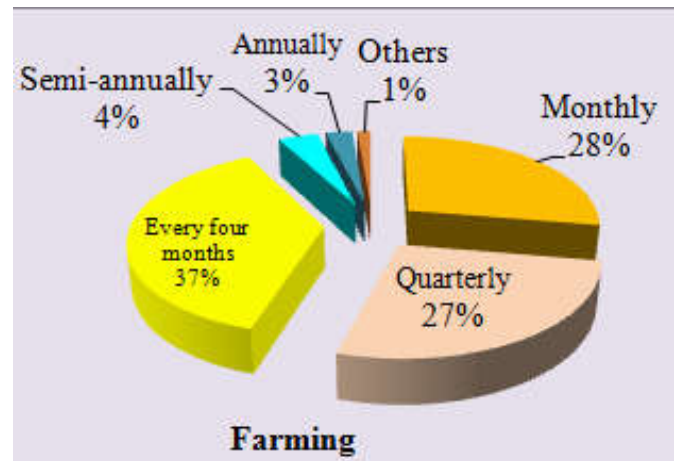


Figure 2. Occurrence of Family Income Among Farmers

It was found out further that the family with monthly harvest often involved in lending just to send children in school. This implies that regardless of the income status of the family, education of children is a priority. It is shown in Figure 3 that monthly earners in fishing were comparable to daily earners. This means that fishers who have well planned saving scheme have the assurance of supporting their children enrolled in the university. Yet, interview revealed that many of the families involved in the fishing industry were also engaged in lending to provide capital of their fishing activities, sustain the daily needs of the family, and support the matriculation schedules of their schooling children. This is a manifestation that education is also a priority among the fishers. On the other hand, a great advantage can be seen to students whose parents were working in government and private agencies since family income is received bimonthly and monthly by bulk of the parents of the respondents (90%). Similar scenario was observed to those students with parents employed abroad (94%). Unfortunately, however, the 12 percent of the respondents whose parents were engaged as habal-habal drivers, sari-sari store owners, fruit and fish vendors, sales ladies, carpentry, masonry, and the like was the weekly and daily earners whose earnings were enough to

support the daily needs of the family. Interview confirmed that students who belonged to these families were hired as student labors or working students in the university and others outside the university. Some also were recipient of the scholarships offered by the government and other supportive agencies. This means that a considerable number of students in the university were least earners yet they prioritized education. Figure 4 presents that about 60 percent of the students whose payment to their obligation in school was derived mainly from the family main source of income. It can be construed that matriculation collection should be scheduled to appropriately correspond to the calendar of family earnings. Presented in Table 1 is the mode of matriculation payment previously and currently practiced by the students in the university. Payment of Php 500 upon registration and installments of the remaining which were paid during the preliminary examination, midterm examination, and final examination was dominantly practiced by the students. This refuted however to the current policy of the university requiring students to pay a minimum of Php 1000 upon registration. Likewise, the table shows variations in the students' practices in paying their obligation to the university. Moreover, payment of Php 500 upon registration and the remaining was paid during enrolment of the succeeding semester was practiced by about 2 percent of the respondents. This means that these students accrued their obligation to the university and failed to settle their financial commitment on time. This scenario certainly affects the university's internally generated income. Moreover, the situation characterizes the semestral receivables of the university. Figure 5 pictures out that the monthly receipts of the university were higher in March and in October in almost all campuses of the university system. This supports to the fact that March and October are the ends of the semesters where bulk of students is expected to pay their financial obligation to the university.

A similar picture can be seen in Figure 6 where collections of almost all of the campuses of the university system were higher in March and in October. March and October for calendar year 2014 were the closing periods of the semesters where students paid their matriculation obligation to the university. In Figure 7, March, July and December reflected the highest monthly receipts. March was the closing period of the second semester, 2014 – 2015, July was the enrolment period of the first semester, 2015 – 2016, and December was the closing period of the first semester, 2015 – 2016. Data showed that the large size of students in the university settled their matriculation payment during the ends of the semester. Results contradicted the current policy of the university in which students were expected to pay bigger amount during the preliminary and midterm examinations and supposedly projected higher monthly receipts. Figure 8 reveals that all campuses of the university registered receivables every at the end of the semester. Receivables ranged from more than 500 thousand pesos to almost 6 million pesos in Dapitan Campus from 2013 to 2015, more than 8 million to almost 15 million pesos in Dipolog Campus, more than 3 million to almost 9 million pesos in Katipunan Campus, more than 2 thousand to almost 9 million in Tampilisan Campus, and more than 1 million to about 3 million pesos in Siocon Campus. In comparison, Dipolog Campus registered the highest figure of receivables. This means that the current matriculation collection policy of the university is not properly implemented. The findings concluded the need of matriculation collection procedures to address the amount of receivables and thus optimize matriculation collection.

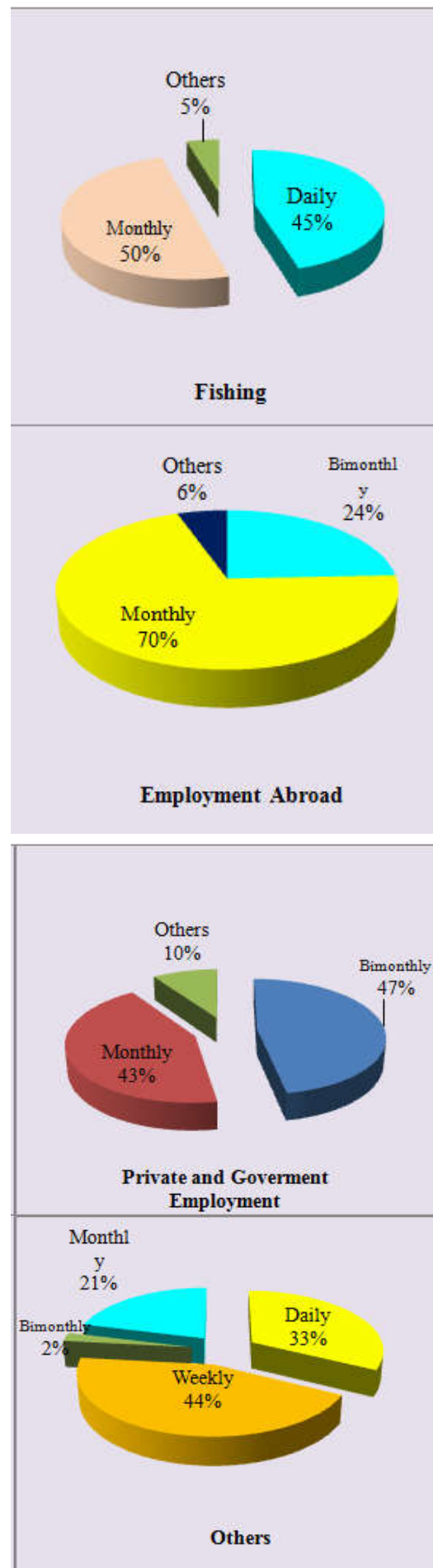


Figure 3. Occurrence of Family Income Among Fishers, Private and Government Employee, Employment Abroad, and Others

**Table 1. Mode of Matriculation Payment Previously and Currently Practiced**

Indicators	Percent
Cash payment during registration	5
Payment of Php 500 upon registration and installments of the remaining which were paid during the preli exam, midterm exam, and final exam	33
Payment of Php 500 upon registration and installments of the remaining which were paid during the midterm exam and final exam	17
Payment of Php 500 upon registration and the remaining was paid during the final exam	19
Payment of Php 500 upon registration and the remaining was paid monthly	0.2
Payment of Php 500 upon registration and the remaining was paid during enrolment of the succeeding semester	1.8
Others	24
Total	100

**Table 2. Mode of Matriculation Payment to Optimize the University Collection**

Indicators	Frequency (Percent)		$X^2$ value	<i>p</i> -value at .05	Decision
	Students	Teachers & Tellers			
Cash payment during registration	33 (9.2)	2 (1.1)	11.685	0.001	Significant
Payment of Php 500 upon registration and two equal installments of the remaining each of which shall be paid during the midterm exam and final exam	53 (14.7)	15 (8.4)	4.362	0.037	Significant
Payment of Php 500 upon registration and three equal installments of the remaining each of which shall be paid during the prelim exam, midterm exam and final exam	160 (44.4)	77 (43.0)	0.099	0.753	Not Significant
Payment of Php 500 upon registration and four equal installments of the remaining each of which shall be paid during the prelim exam, midterm exam, semi-final exam and final exam	36 (10.0)	28 (15.6)	3.638	.056	Not Significant
Payment of three equal installments (registration, midterm exam, and final exam)	21 (5.8)	12 (6.7)	0.158	0.691	Not Significant
Payment of four equal installments (registration, prelim exam, midterm exam, and final exam)	22 (6.1)	25 (14.0)	9.269	0.002	Significant
Payment of five equal installments (registration, prelim exam, midterm exam, semi-final, and final exam)	35 (9.7)	20 (11.2)	0.275	0.600	Not Significant
Total	360 (100)	179 (100)			

**Table 3. Parameters to Schedule Major Examinations**

Scheduling Parameters	Frequency (Percent)		$X^2$ value	<i>p</i> -value	Decision
	Students	Teachers & Tellers			
Final Examinations Only	15 (4.2)	13 (7.3)	2.327	0.127	Not Significant
Midterm and Final Examinations	37 (10.3)	21 (11.7)	0.263	0.608	Not Significant
Preliminary, Midterm and Final Examinations	238 (66.1)	95 (53.1)	8.608	0.003	Significant
Preliminary, Midterm, Semi-Final and Final Examinations	70 (19.4)	50 (27.9)	4.978	0.026	Significant
Total	360 (100)	179 (100)			

On the other hand, Table 2 presents the mode of matriculation payment to optimize the university's matriculation collection as perceived by the students and teachers/tellers. The table shows differences between the opinions of the students and teachers/tellers along cash payment during registration, payment of Php 500 upon registration and two equal installments of the remaining each of which shall be paid during the midterm exam and final exam, and payment of four equal installments (registration, prelim exam, midterm exam, and final exam). This means that the opinions of the two groups do not conform to these payment schemes. The table also presents that students and teachers/tellers were homogeneously unfavored along payment of Php 500 upon registration and three equal installments of the remaining each of which shall be paid during the prelim exam, midterm exam and final exam (about 56% of the students and 57% of the teachers/tellers); payment of Php 500 upon registration

and four equal installments of the remaining each of which shall be paid during the prelim exam, midterm exam, semi-final exam and final exam (90% of the students and about 85% of the teachers/tellers); payment of three equal installments (registration, midterm exam, and final exam) (about 94% of the students and the teachers/tellers); and payment of five equal installments (registration, prelim exam, midterm exam, semi-final, and final exam) (91% of the students and about 89% of the teachers/tellers). On the positive side, however, about 45 percent of the students and 43 percent of the teachers/tellers preferred payment of Php 500 upon registration and three equal installments of the remaining each of which shall be paid during the preliminary examination, midterm examination and final examination. This means that the two groups uniformly favored in this payment scheme to optimize the matriculation collection of the university. However, this necessitates that strict implementation of the matriculation collection through

scheduling parameters should be observed in the university system. Moreover, a policy standard should be formulated and to be approved by the Board of Regents to strongly support the matriculation collection procedures in the university. Table 3 reveals the major examination schedules.

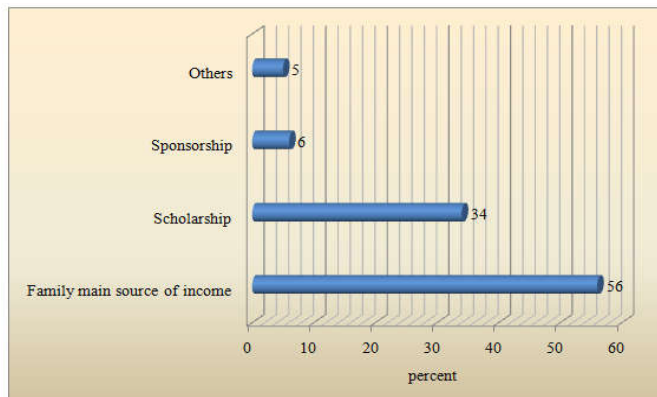


Figure 4. Main Source of Matriculation Payment

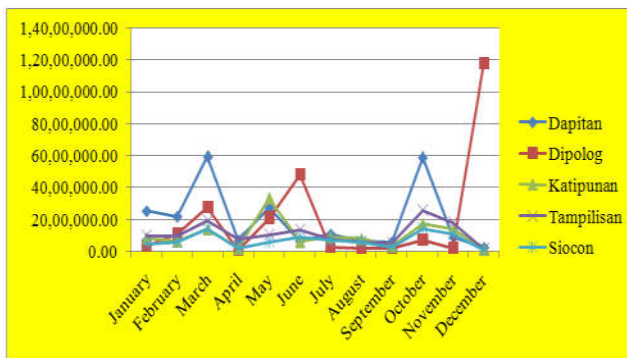


Figure 5. Monthly Receipts of the University for the Calendar Year 2013

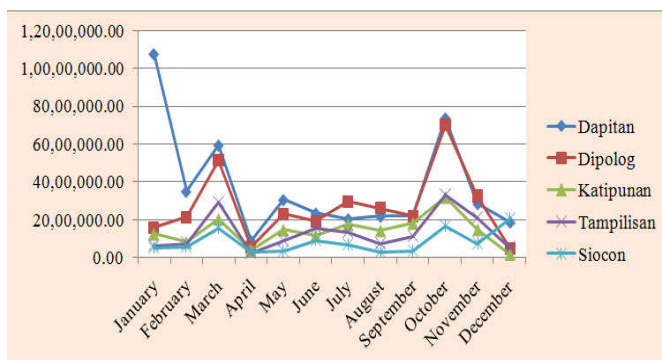


Figure 6. Monthly Receipts of the University for the Calendar Year 2014

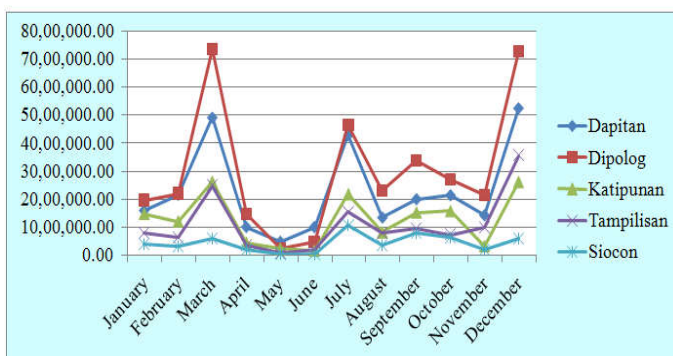


Figure 7. Monthly Receipts of the University for the Calendar Year 2015

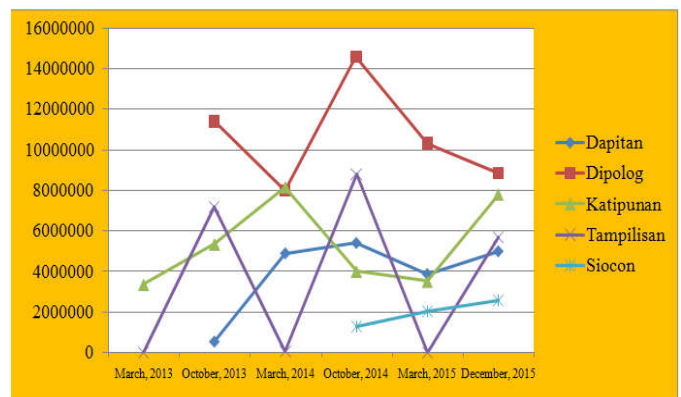


Figure 8. Receivables from March of 2013 to December of 2015

As reflected in the table, about 96 percent of the student-respondents and about 93 percent of the teachers/tellers homogeneously unfavored to have only final examinations. Similarly, about 90 percent of both the students and the teachers/tellers homogeneously unfavored to have midterm and final examinations. This means that final examinations only, and midterm and final examinations were not favorably preferred by both the students and the teachers/tellers. On the other hand, the table shows further that more than 65 percent of the students and about 54 percent of the teachers/tellers preferred three major examinations, namely: preliminary, midterm, and final examinations. However, responses of the students differed significantly from that of the teachers/tellers along these schedules of major examinations. This means that the two groups are not homogeneously favored to have three major examinations in a semester. The implication is obviously seen that the frequency counts are not identically distributed across the two groups. Finding also supports the above finding that matriculation collection should be done during the preliminary, midterm, and final examinations. However, this requires that the university should establish strong basis in the formulation of matriculation collection policy that will be strictly implemented and to be treated as part of the quality management system of the university.

### DISCUSSION

As the economic landscape continues to change, it has become increasingly important that those responsible for the administration of public funds in the university develop processes through which funding lines and internally generated income are appropriately managed for the benefit of all. The Jose Rizal Memorial State University System over many years focused on enabling students' access to higher education and, in so doing, has currently a variety of collection practices for allowing students meet their fee obligations which in turn register huge amount of receivables. It is concluded that defining the appropriate procedures for the collection of fees is a necessity and should be used as a guideline. The alarming statement of receivables provides a source of reference for the university to follow when managing its fee collection process. Through the development of matriculation collection procedures with appropriate scheduling parameters on major examinations, the university could work with the understanding that national economic factors have directly influenced the everyday lives and affordability of all students in the university. While the university acknowledges the economic hardships that many students are facing, the university is also dealing with reduced government funding and therefore

students have a role to play, not only in paying their school fees, but also ensuring that the university receives the correct amount of matriculation from them. Most importantly, results of the study highlight the "Scheduling Theory" (Encyclopedia of Mathematics, 2016) which deals with optimization problems for a process of processing a finite set of actions in a system with limited resources. In the case of Jose Rizal Memorial State University, facilitating all students in the payment process is central to the success of the collection of fees. Making provisions to allow a minority of students to pay in a non-standard method will help ensure that the university system optimizes the amount of fees which it collects.

## REFERENCES

- Commission on Audit Circular No. 2000-002. Accounting Guidelines and Procedures on the Use of Income of SUCs Pursuant to Republic Act No. 8292. Retrieved September 18, 2016 from [http://www.coa.gov.ph/phocadownloadpap/userupload/Issuances/Circulars/Circ2000/COA\\_C2000-002.pdf](http://www.coa.gov.ph/phocadownloadpap/userupload/Issuances/Circulars/Circ2000/COA_C2000-002.pdf)
- Commission on Higher Education Memorandum Order No. 20, Series of 2011. Policies and Guidelines for the Use of Income, Special Trust Fund and Programs of Receipts and Expenditures of the State Universities and Colleges (SUCs). Retrieved September 24, 2016 from <http://www.ched.gov.ph/wp-content/uploads/2013/07/CMO-No,20-s2011.pdf>
- Cuenca, J.S. 2011. Efficiency of State Universities and Colleges in the Philippines: A Data Envelopment Analysis. Retrieved September 28, 2016 from <http://dirp3pids.gov.ph/ris/dps/pidsdps1114.pdf>
- Encyclopedia of Mathematics 2016. Scheduling Theory. Retrieved September 28, 2016 from [http://www.encyclopediaofmath.org/index.php/Scheduling\\_theory](http://www.encyclopediaofmath.org/index.php/Scheduling_theory)
- Manasan, R.G. and Revilla, M.L.D. 2015. Assessment of Sources and Utilization of Funding of State Universities and Colleges. Retrieved September 18, 2016 from [http://www.dbm.gov.ph/wp-content/uploads/DBM%20Publications/FPB/ZBB-2014/Final%20Report\\_Assessment%20of%20Sources%20and%20Utilization%20of%20Funding%20of%20State%20Universities%20and%20Colleges.pdf](http://www.dbm.gov.ph/wp-content/uploads/DBM%20Publications/FPB/ZBB-2014/Final%20Report_Assessment%20of%20Sources%20and%20Utilization%20of%20Funding%20of%20State%20Universities%20and%20Colleges.pdf)
- Manasan, R.G. and Revilla, M.L.D. 2015. Assessment of Sources and Utilization of Funding of State Universities and Colleges. Retrieved September 18, 2016 from <http://dirp4.pids.gov.ph/ris/dps/pidsdps1203.pdf>
- Republic Act 8292. Higher Education Modernization Act of 1997. Retrieved September 18, 2016 from <http://www.chanrobles.com/republicacts/republicactno8292.html#.V95Q1tSrSt8>
- Tolentino, M.R.L. 2014. COA: Despite P168-M trust fund, state university fails to modernize The Manila Times. Retrieved September 28, 2016 from <http://www.manilatimes.net/coa-despite-p168-m-trust-fundstate-university-fails-modernize/131978/>

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