

Islamic higher education students' expenditure before and during pandemic in Indonesia

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ABSTRACT

Students are experiencing difficulty with online learning because it requires infrastructure, such as internet access that needs to be purchased. This study examined whether online lectures increase or decrease family/student expenses on education using a qualitative approach. Data on education expenditures were collected by interviewing 736 students at State Islamic University (UIN) Antasari, Indonesia before the COVID-19 pandemic and 761 students during the occurrence. Also, interviews were used to collect data on opportunity costs during the pandemic. The results showed that the student/family average expenditure on education at State Islamic University in Indonesia (PTKIN) before the occurrence was IDR 20,420,708 per year. Meanwhile, during the pandemic, their expenses decreased to an average of IDR 15,788,989 per year, indicating a decline of IDR 4,631,719 or 22.68%.

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1. INTRODUCTION

The COVID-19 pandemic has affected several aspects of life in all countries. This is the reason the World Health Organization (WHO) declared an international health emergency on January 30, 2020. Besides being able to cause death, COVID-19 also has mental health effects, such as anxiety, loneliness, difficulty concentrating, fear, and stress [1]. Workers, particularly in healthcare, feel more depressed, anxious, and stressed compared to other service personnel [2]. The enforcement of social distancing, self-isolation, and travel restrictions has led to a decrease in the workforce across all economic sectors and resulted in the loss of many jobs [3]. This is consistent with the discovery in that global production has fallen by 7% of gross domestic product (GDP) [4]. Agriculture also experienced a production decline due to restrictions on public mobility [5]. Teachers in schools do not realize they are at greater risk than in other workplaces, because they see students at a low-risk age [6]. It has been proven that the pandemic had a significant effect on the manufacturing industry, education, finance, healthcare and pharmaceutical, hospitality, tourism and aviation, and food [7]. This has caused people to always hold online meetings and learning, which led to a change in lifestyle and has an effect on socio-psychological behavior [8]. However, the ecosystem has improved because pollution and waste are much reduced [9].

In Indonesia, the face-to-face lecture process has been suspended since the third week of March 2020 but was subsequently conducted online. State Islamic University (UIN) Antasari, Indonesia is a higher

institution that provides education in the fields of Islam or Islamic studies, such as education, law, economics, communication, philosophy, and theology. All these fields are under the ministry of religious affairs (MORA). Meanwhile, UIN Antasari has not opened science, technology, engineering, and mathematics (STEM) fields, under the ministry of education and culture. Education is generally managed by two ministries in this country. The first is MORA, which manages the religious schools (*madrasas*) and Islamic higher education, while the second is the ministry of education and culture, managing the public schools and higher education. It has been observed that online lectures often cause problems for students during the pandemic, specifically for those who have not participated in it before the occurrence [10]. For example, students living in rural areas are often faced with challenges in terms of limited skills, technological access, and other tools [11]. This makes the student councils across the country file demands, such as requesting the provision of internet quotas or free internet access and tuition waivers/reductions. Furthermore, the student council of the faculty of tarbiyah and teacher training at UIN Antasari also sent a similar letter, stating that the assignments given by lecturers are very time-consuming and stressful. The UIN Antasari student alliance (AMUBA) similarly sent a letter to the chancellor with the same content, demanding tuition fee reductions, internet quota provision, and review of assignments given by lecturers, which made students to be psychologically depressed.

The psychological pressure usually arises because they are accustomed to face-to-face learning, listening to lectures, and doing easy assignments. Some do not even attempt the task given by lectures, particularly the group assignments. This differs from online learning, which requires students to be more independent in learning and completing assignments given by lectures. With these assignments, students learn independently but those who lack self-coordination are unable to adapt. It has been observed that self-efficacy for self-regulated learning contributes to learning outcomes in an online learning environment. This is reinforced by the conclusion in [12] that online learning has less supervision and accountability, thereby requiring a high self-efficacy level for self-regulated learning [12]. Lee *et al.* found that the difficulty in the educational process was because the younger generations were affected by the pandemic in three aspects, namely: i) Disruption of education, training, and work-based or vocational learning; ii) Difficulties for job seekers and entering the job market; and iii) Loss of income [13].

In addition, online learning requires infrastructure in the form of internet access, which students need to purchase. This has resulted in more expenditure, particularly in Indonesia, since only a few houses have internet access by cable, while most of the population uses broadband through smartphones, which needs to be purchased, based on data package numbers. It has been observed that the 3G or 4G data network in the villages is still very limited, indicating a poor internet connection. This affects the online learning process as students need to locate an area with a 3G or 4G network during online courses.

Online learning, in which students do not have to go to the classroom, tends to increase internet consumption, specifically for lectures with video conferences. However, students remain at home, which reduces the cost of consumption, transportation, and accommodation. The phenomenon shows a paradox because students feel studying online requires payment for the internet. However, studies showed that online lectures reduce expenditures and opportunity costs. This is the reason this study investigates whether online lectures cause an increase in educational spending by families/students.

2. RESEARCH METHOD

This was a qualitative study that used student spending data from Ahmad Juhaidi *et al.* before the COVID-19 pandemic in January 2020 [8]. Furthermore, the data were collected through structured written interviews with 736 UIN Antasari students proportionally from randomly selected faculties in each study program. The amount spent by students during the pandemic was also obtained through structured interviews written by 761 people from May to June 2021. The expenditure and opportunity cost was further explored by conducting in-depth interviews with students randomly until the data was saturated in three districts/cities, namely Tabalong, Tanah Laut, and Banjarmasin. The data collection process was performed by undergraduate students of the Islamic Education Management Department, State Islamic University Antasari Banjarmasin.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1. Monetary cost

Students' expenditures before and during the pandemic varied as the value increased in some allocations but decreased in others. Meanwhile, their expenditures have generally declined, hence, they do

not lose opportunity cost during the pandemic. Table 1 shows students' expenditures before the pandemic while Table 2 shows students' expenditures on education decreased (during the pandemic).

Table 1. Annual students' expenditures (IDR) before the pandemic

No	Faculty	Accomm	Consumption	Transp	Study needs	Comm	Pers needs	Others	Total
1	Shariah (Islamic Law)	5,230,588	9,125,000	1,678,481	667,229	810,714	3,485,714	844,235	21,841,961
2	Tarbiyah and Teacher Training	4,158,854	9,194,426	1,624,873	694,061	878,629	1,395,164	931,075	18,877,082
3	Ushuluddin and Humanities	4,125,405	12,725,676	1,506,946	684,324	920,432	1,210,541	348,649	21,521,973
4	Dakwah and Communication	5,525,343	7,950,156	1,613,125	748,235	1,102,059	2,085,231	1,463,571	20,487,720
5	Economics and Islamic Business	4,762,533	9,335,889	2,212,447	578,333	974,600	789,000	722,000	19,374,802
	(\bar{X})	4,760,545	9,666,229	1,727,174	674,436	937,287	1,793,130	861,906	20,420,708

(1) Accommodation: Rent a place to stay/boarding house; (2) Consumption: consumption/eating/snacking; (3) Transportation: transportation/fuel; (4) Study needs: study needs, books, stationery; (5) Communication: Communication, credit, internet data; (6) Personal Needs: Personal needs: soap, perfume, clothes; (7) Others: other costs that are not included in the previous category.

Table 2. Annual students' expenditures during the pandemic

No	Faculty	Accomm	Consumption	Transp	Study needs	Communication	Pers needs	Others	Total
1	Shariah (Islamic Law)	2,529,167	7,502,940	1,723,125	525,417	1,112,250	1,117,533	829,930	15,340,362
2	Tarbiyah and Teacher Training	2,723,019	8,552,169	1,405,613	598,943	1,148,943	1,198,226	1,274,311	16,901,224
3	Ushuluddin and humanities	1,138,261	3,914,493	794,340	633,739	939,826	1,803,478	1,911,304	11,135,441
4	Dakwah and Communication	2,715,000	6,071,635	1,832,885	755,769	1,204,272	1,285,962	2,252,308	16,117,831
5	Economy and Islamic Business	2,733,120	10,001,000	2,160,216	809,040	1,012,632	1,482,240	1,251,840	19,450,088
	(\bar{X})	2,367,713	7,208,447	1,583,236	664,582	1,083,585	1,377,488	1,503,939	15,788,989

(1) Accommodation: Rent a place to stay/boarding house; (2) Consumption: consumption/eating/snacking; (3) Transportation: transportation/fuel; (4) Study Needs: study needs, books, stationery; (5) Communication: Communication, credit, internet data; (6) Personal Needs: Personal needs: soap, perfume, clothes; and (7) Others: other costs that are not included in the previous category.

3.1.2. Single tuition

The UIN Antasari non-tax revenue (PNBP) income report in 2019 and 2020 showed an increase of IDR 34,145,325,000 to 38,676,500,000. Meanwhile, single tuition payments are still mandatory for students and the amount paid is equivalent to before the pandemic, except for those who received single tuition (UKT) relief, which was provided in two schemes, namely: i) The reduction in the amount to be paid by one grade lower than before; and ii) The provision of financial assistance to pay UKT.

According to the UIN Antasari Chancellor's decision, the recipients of the UKT reduction assistance in the odd semester of the 2021/2022 academic year were 736 students. Consequently, students who before the pandemic paid UKT of IDR 3,100,000 per semester were reduced to IDR 2,300,000 and those who previously paid IDR 1,400,000 were reduced by one grade to IDR 1,000,000. This decrease was based on the UKT grade at UIN Antasari, which differed depending on the number of students admitted.

A total of 156 students received assistance from *zakah*, *infaq*, and *sadaqah* (ZIS) to pay IDR 400,000 UKT per person out of IDR 900,000 in the semester. This assistance was given to students whose parents have died, experienced employment termination or layoff, business closure, and significantly reduced income. Moreover, all these provisions must be proven by documents issued by the authorities.

3.1.3. Accommodation

Before the pandemic, students were paying house rent in Banjarmasin. At that time, their residence was grouped into i) Students living with their parents because they are residents of Banjarmasin or the nearest district; ii) Those who rented apartments and shared the amount with their housemates; iii) Those renting a boarding house alone or with friends; iv) The house bought by parents; and v) Those living in a government-owned student dormitory. Figure 1 shows the comparison of students' expenditures for accommodation before and during the pandemic. Certain students enjoyed a reduction of 50.26% in house rents from IDR 250,000 to IDR 200,000 but some obtain no relief from the boarding house owner. Those

whose rent was not relieved tend to stop renting a boarding house while some are still willing to pay because they have a lot of properties in the place.

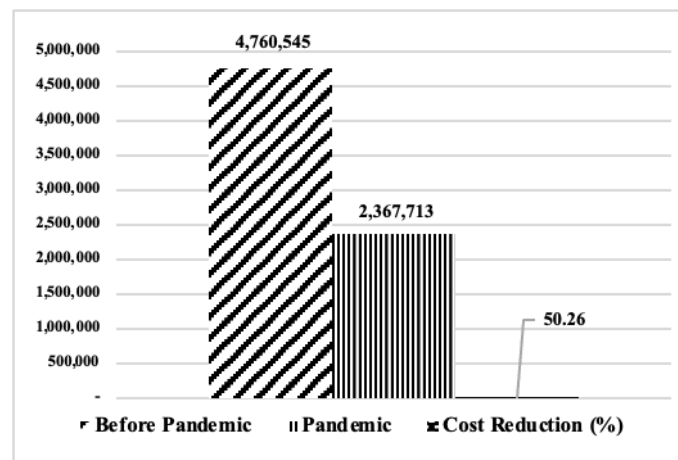


Figure 1. Differences in expenditures for accommodation

3.1.4. Consumption

Student's daily meals expenses have decreased from IDR 9,666,229 to IDR 7,208,447 per year. This is because they live and eat together with their parents. The average expenditure for consumption before and during the pandemic is shown in Figure 2. It was observed that students' expenditure on consumption during the pandemic decreased by 25.43% compared to before. This was recorded because learning was provided online during the occurrence, hence, students were at home and eat with their parents.

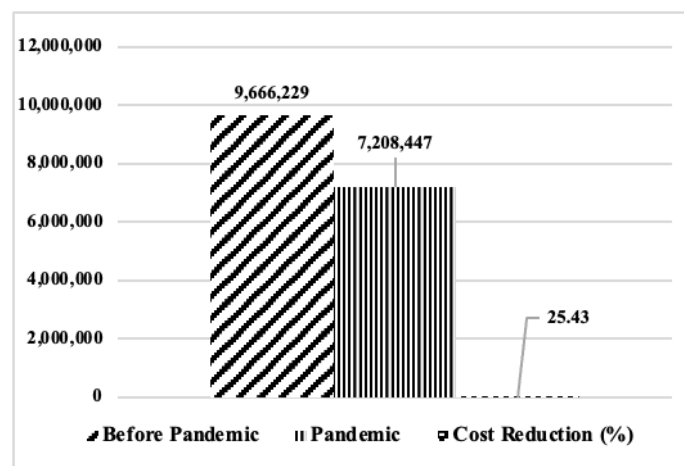


Figure 2. Differences in expenditure for consumption

3.1.5. Transportation

The transportation cost during the pandemic includes the cost of buying gasoline to attend lectures. Those who do not use motorized vehicles while studying in Banjarmasin experience no decrease in transportation costs. Meanwhile, there is an increase in transportation costs for students using their parents' vehicles. Figure 3 shows the decrease in students' expenditure on transportation. It was observed that transportation costs decreased by 8.33% from IDR 1,727,174 before the pandemic to an average of IDR 1,583,236 per student during the occurrence.

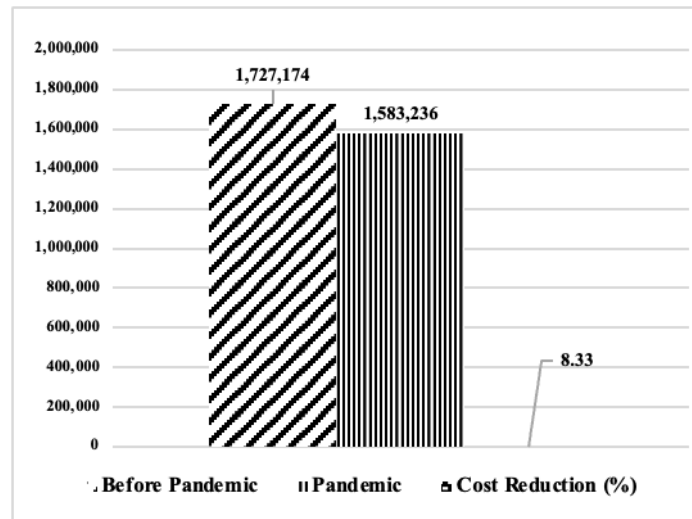


Figure 3. Differences in expenditures for transportation

3.1.6. Study need

The cost of buying study materials, such as books, photocopies, pens, and other equipment decreased by 1.46% during the pandemic. This is because the lecture materials are imported independently by students or lecturers. Figure 4 shows the difference in students' expenditure before and during the pandemic. Students feel the expenses on college supplies were reduced due to the pandemic since the cost of printing and copying papers for class discussions no longer exists. In online learning, lecture assignments are submitted in a digital form, which has significantly reduced learning costs.

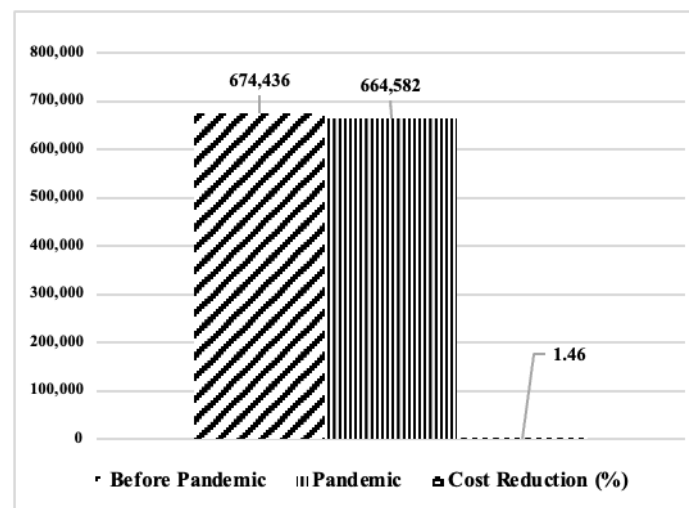


Figure 4. Differences in expenditures for study needs

3.1.7. Expenditures for communication/internet

Internet connection expenses are the most common excuse given by students. It was observed that the average cost of purchasing internet quota for a year during the pandemic was IDR 1,083,585. This shows an increase of 15.61% from IDR 937,287 before the occurrence. Figure 5 shows the increase in students' expenditure on the internet. None of students/informants felt that online tuition fees were more expensive or burdensome because they had to buy quotas. Therefore, they believed that it is cheaper to study online than face-to-face lectures.

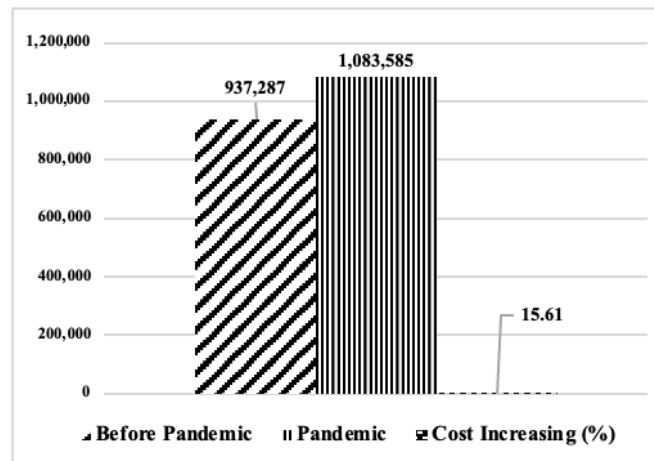


Figure 5. Differences in expenditures for communication/internet

3.1.8. Expenditures for personal needs

Personal needs include soap, perfume, toothpaste, clothes, and other necessities. This personal expenditure decreased by 23.18% from an average of IDR 1,793,130 per year before the pandemic to IDR 1,377,488 during the occurrence. Figure 6 shows the decrease in expenditure for personal needs. The cost reduction was due to students using personal equipment, namely soap, shampoo, toothpaste, etc., and even shared with other family members. Clothing expenses were also reduced as they stay at home with no worry about the appropriate cloth to wear.

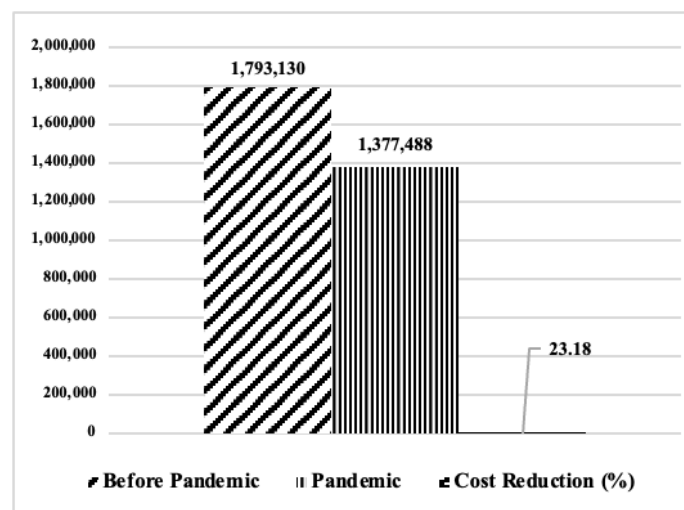


Figure 6. Differences in expenditures for personal needs

3.1.9. Expenditures for other needs

Expenditures for other purposes are those not grouped with the previous categories, such as recreation, medicine. The expenses for this category increased during the pandemic by 74.49% from an average of IDR 861,906 per year to 1,503,939 as shown in Figure 7. These significant miscellaneous expenses were used by students for traveling relatively more often than during face-to-face lectures. This is because they use their free time to visit recreational places or friends in hometowns. The students' expense data on education has decreased during the pandemic.

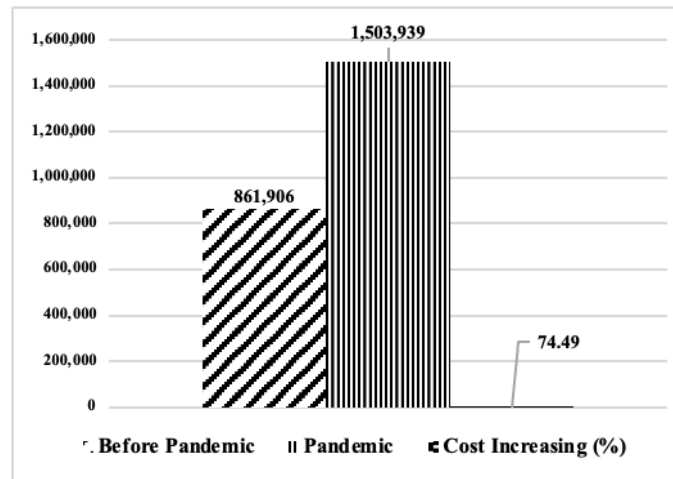


Figure 7. Expenditure difference for other needs

This is evident from the average expenditure of IDR 20,420,708 per student before the pandemic, compared to IDR 15,788,989 during the occurrence. These values indicated a decrease of IDR 4,631,719 or 22.68% in student/family expenses on education. It is important to note that these expenses do not include the payment for UKT, hence, it has to be paid except for students who receive UKT grade reduction relief. Figure 8 shows the decrease in expenditure on education costs during the pandemic.

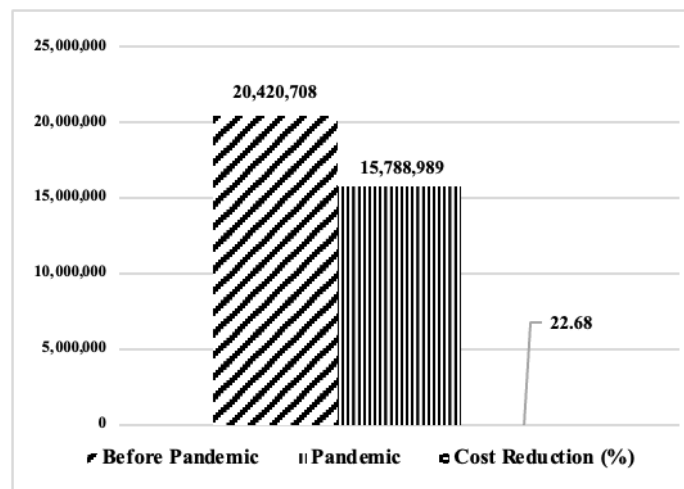


Figure 8. Decrease in total students' expenditure

Online learning has time and cost advantages. It leads to the conclusion that it does not increase students' expenditures. However, there was a decrease in their spending during online learning due to the flexibility of the place and time of the study, as well as the digital materials accessible to students.

3.1.10. Opportunity cost which returns during pandemic

Online learning has an opportunity cost since students are not on campus to participate in learning. For example, they lose the opportunity to socialize with lecturers and fellow students, as well as the opportunity to visit libraries and other educational facilities. Moreover, online learning during a pandemic is returning opportunity costs with face-to-face learning. The opportunity cost amortization during the pandemic is illustrated in the following Hfz statement:

“During online learning, I was able to help my mother tap the rubber, but the disadvantage was that I was sometimes neglected from work and exhausted after tapping the rubber.”

Other students also help their parents in earning a living, as stated by Hf:

“When I am online, I am able to help Mom take care of the shop at home, hence, Mom was able to rest.”

In addition, students help parents make a living as observed from the following sentence from Am:

“My mother is a seamstress, when I am at home, I can take care of my sister, hence, my mother is not disturbed when sewing. This makes sewing to be faster, thereby increasing income.”

Students were able to take care of sick parents during the pandemic. Meanwhile, this is impossible during face-to-face learning before the occurrence, as stated by R Ren:

“During the pandemic, I was able to take care of my father who had a stroke alternately with his brother.”

In addition, students are able to help their parents with various household chores, such as cleaning the house, washing dishes, washing clothes, cooking, and other activities. Figure 9 shows the return opportunity cost during the pandemic.

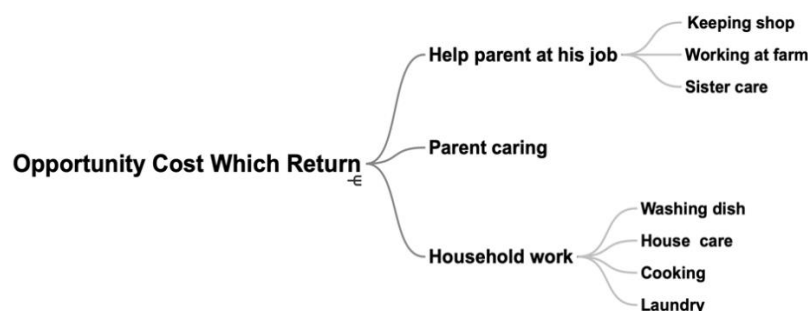


Figure 9. Opportunity cost which returns during pandemic

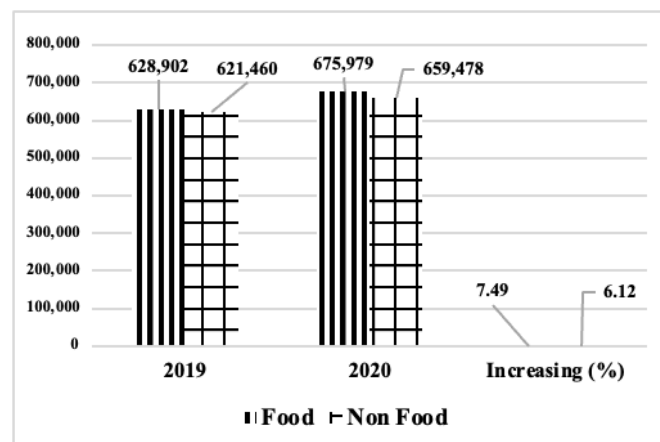
3.2. Discussion

The results of this study are in line with previous investigation that online learning has time and cost benefits. In 2021, Jomana *et al.* [14], online learning reduces costs and thus increases the return on investment by about 60%. The advantages of online learning include being easy to access, and also saving time and money [14]. Furthermore, it allows lecturers and students to study according to the free time available [15]. It is safe to conclude that online learning does not increase the costs incurred by students, rather it reduces their expenditures, due to the flexibility of the place and time of the study, as well as the digital materials they were able to access. This is consistent with the results of Asif *et al.* that students considered online learning to be more flexible, cheaper, support independent learning, and more convenient than face-to-face lectures [16]. According to Wang [17], mobility was significantly reduced during the pandemic, yet it does not hinder access to learning, specifically in terms of time and place flexibility. Belhaj discovered that this flexibility in learning during the pandemic has prompted more than 51% of Saudi Arabia's students to desire online learning implementation in the future [18].

The reduced expenditure on education is not consistent with household spending in South Kalimantan. In 2019, the average monthly family expenditure was IDR 1,250,362, indicating 50.30% for food and 49.7% for non-food, such as housing, goods/services, clothing, durable goods, taxes, insurance, and parties/festivals. Amid the pandemic in 2020, family expenses increased to IDR 1,335,457 per month, indicating 7.49% for food and 6.12% for non-food as shown in Figure 10.

This simply means that family expenses on education do not increase, except for other purposes. Government expenditures on primary and secondary education are associated with poverty reduction [19]. Similarly, family expenses that prioritize supporting the learning process have a positive effect on education

outcomes. Figure 10 shows the difference in the expenditure of South Kalimantan before and during the pandemic.



Source:

Central Bureau of Statistics of South Kalimantan, South Kalimantan People's Welfare Indicator 2019/2020
Central Bureau of Statistics of South Kalimantan, South Kalimantan People's Welfare Statistics 2020

Figure 10. Expenditure per capita per month

In addition to the cost burden issue, online learning conducted during the pandemic is also associated with various other problems. Online learning during a pandemic is different from learning during normal times. Lily explained the differences between online learning during a pandemic and normal times: i) Online learning during a pandemic was performed suddenly without preparation; ii) It was conducted in all countries as a solution to delaying face-to-face learning; iii) Online learning is known by all levels of society; iv) It was utilized at all levels from early childhood education to tertiary institutions; and v) The learning complied with health emergency measures [20]. Hodges *et al.* also stated that online learning during a pandemic was quite different from those performed ordinarily because the materials, media, learning management, and professional development are not fully prepared for the process. Therefore, it was concluded that online learning during the pandemic was an emergency distance teaching [21].

Even though the pandemic has reduced the expenses on education, students had problems interacting with content, friends, and lecturers, thereby affecting their learning satisfaction [22]. It has been observed that students benefited from knowledge sharing amongst student and others in communities. [23] On The other hand, losing hope and fear of future were prevalent on student life [24]. Students are unhappy because they are separated from social life with classmates and colleagues [25]. This resulted in more anxiety about online learning, disappointment with online graduation, and different learning standards [26]. Other problems are technological infrastructure, high cost of the internet, low internet speed, family financial crisis, and mental pressure [27].

The factors affecting students' satisfaction of online learning during the pandemic are technology, perceived benefit of online course, teacher performance, and external factors [28]. Students suggested that technical skills need to be evaluated when participating in online learning [29]. Also, internet self-efficacy (ISE) and self-efficacy of interacting with learning content (SEILC) were associated with concentration in online learning but negatively related to internet cognitive fatigue (ICF) [30]. This means that when the ISE and SEILC of students are better, they tend to be more concentrated when learning online. Meanwhile, ICF decreased when ISE and SEILC improved [31].

Problems encountered with online learning during the pandemic are minimizable by increasing students' self-efficacy, which is an important factor in online learning [30]. One of popular self efficacy concept was proposed by Bandura [32]. He explained that self efficacy is student's belief in his ability, and they will try to act what they believe to act and put efforts into his action. Self-efficacy is characterized by commitment to goals, application of learning habits, and learning method adaptation [33]. It is important to note that self-efficacy is not a skill but a belief in an individual's ability [34], and it directly affects internet confidence [35]. This simply means that healthy self-efficacy is able to improve the student's confidence in using the internet. These factors are also known as the concepts, namely self-regulation. Self regulation learning are influenced by teachers' support and self efficacy. [36] Other concept is self-directed learning.

Self directed learning is significant predictor of student achievement. [37] Self-directed learning may describe as learning on student's initiative, with the learner taking great responsibility for the effort's design, implementation, and evaluation on learning. [38] Students who demonstrate commitment to their goals, apply study habits, and adapt learning methods are able to survive online learning because they have self-regulated and self-directed abilities.

In the context of online learning, ISE is very crucial in motivating students [39]. Furthermore, it affects student satisfaction and academic achievement in online learning [40]. It is also an individual's competence and confidence in using the internet, which is divided into three levels, namely: i) Just joining the community; ii) Existing organization and differentiation, as well as the highest level; and iii) Research and communication.[41] Internet self-efficacy can be divided into three levels: i) Basic self-efficacy, which represents the elementary level of internet assuredness, such as the confidence in using a web browser and printing internet content; ii) Advanced self-efficacy, denoting the proficiency in internet use, such as the confidence in communicating through chat applications and buying goods online; iii) Professional internet self-efficacy, At this level, the internet is an major part of individual's job [39].

This current study considered the three concepts, namely self-regulation, self-directedness, and self-efficacy to be the same, or interrelated. Also, they are considered human agency that reflects the personal ability to exercise self-control. It was observed that the online learning problem during the pandemic also stems from the unpreparedness of lecturers as they do not master the application used, thereby causing a slow response and incomprehensible study material [15]. Another barrier to online learning success was the lack of interaction between lecturers and students [21]. The problems faced by lecturers in online learning also affect ISE. Meanwhile, those who have ISE are always interested to adopt online course and student with low ISE need higher support to adopt online course [42].

4. CONCLUSION




In conclusion, the student/family expenses on education at PTKIN were an average of IDR 20.420.708 per year before the pandemic. This amount decreased during the pandemic to an average of IDR 15.788.989 for each student, indicating a decline of IDR 4.631.719 or 22.68%. In addition, opportunity costs were eliminated during the pandemic, such as helping to earn a living, taking care of parents, and helping with house chores. This research proposes to the government and Islamic Higher Education to prepare and provide infrastructure and human resources for implementing quality online learning beyond pandemic. This online learning will increase people's access to higher education at affordable costs.

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